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(U.S.) Geological Survey, Lakewood, CO Water Resources Div

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Water Resources Data for Colorado

Volume 2. Colorado River Basin above Dolores River

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-78-2

WATER YEAR 1978

Prepared in cooperation with the State of Colorado and with other agencies

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CALENDAR FOR WATER YEAR 1978

1977

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1978

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For information on the water program in Colorado write to:

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Denver Federal Center
Lakewood, CO 80225

1979

PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of Colorado and other agencies by personnel of the Colorado District of the Water Resources Division under the supervision of J. F. Blakey, District Chief, and Alfred Clebsch, Jr., Regional Hydrologist, Central Region.

This report is one of a series issued State by State under the direction of O. M. Hackett, Acting Chief Hydrologist, and the Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Colorado are in three volumes as follows:

Volume 1. Missouri River, Arkansas River, and Rio Grande Basins in Colorado,
Volume 2. Colorado River Basin in Colorado, above the Dolores River, and
Volume 3. Dolores River, Green River, and San Juan River Basins in Colorado.

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WATER RESOURCES DATA FOR COLORADO, 1978

VOLUME 1: MISSOURI RIVER, ARKANSAS RIVER, AND RIO GRANDE BASINS
VOLUME 2: COLORADO RIVER BASIN ABOVE THE DOLORES RIVER
VOLUME 3: DOLORES, GREEN, AND SAN JUAN BASINS

INTRODUCTION

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Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Beginning with the 1964 water year, water-quality records for surface and ground water have been similarly released in separate annual reports. These reports provided for rapid release of preliminary data shortly after the end of the water year. The final data were then released in the Water-Supply Paper series mentioned above. Beginning with the 1975 water year, water data will be released on a State-boundary basis in final form and will not be republished in the Water-Supply Paper series. The 1975 and subsequent water year reports will be in a series which will carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report CO-78-2." These reports are for sale to the public for a nominal fee from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. For more information on available publications, see the section entitled, "PUBLICATIONS" on subsequent pages.

OBSERVATION WELLS, BY COUNTY FOR WHICH RECORDS ARE PUBLISHED

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Delta County 391
Grand County 391

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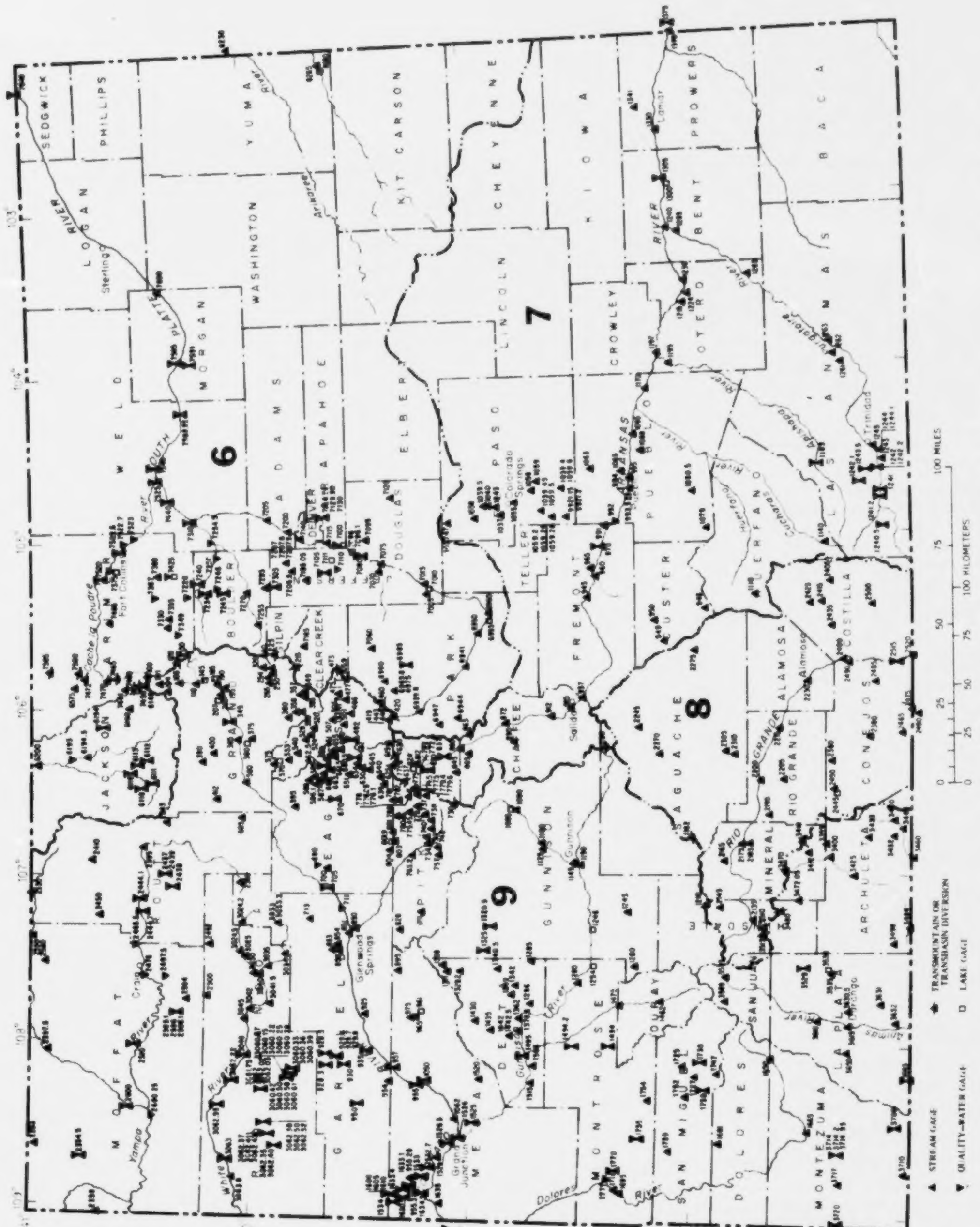
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Cache la Poudre River
ARKANSAS RIVER
RIO GRANDE
Yampa River
White River
Dolores River
Arikaree
Republican
Purgatoire River
Huerfano River
Cucharas River
Alamosa
Animas
102°
103°
104°
105°
106°
107°
108°
109°
41°
39°
38°
37°
STREAM GAGE
QUALITY-WATER GAGE
TRANSMOUNTAIN OR TRANSBASIN DIVERSION
LAKE GAGE
0 25 50 75 100 MILES
0 25 50 75 100 KILOMETERS

Figure 1.--Map showing locations of lake- and stream-gaging stations and water-quality stations in Colorado.

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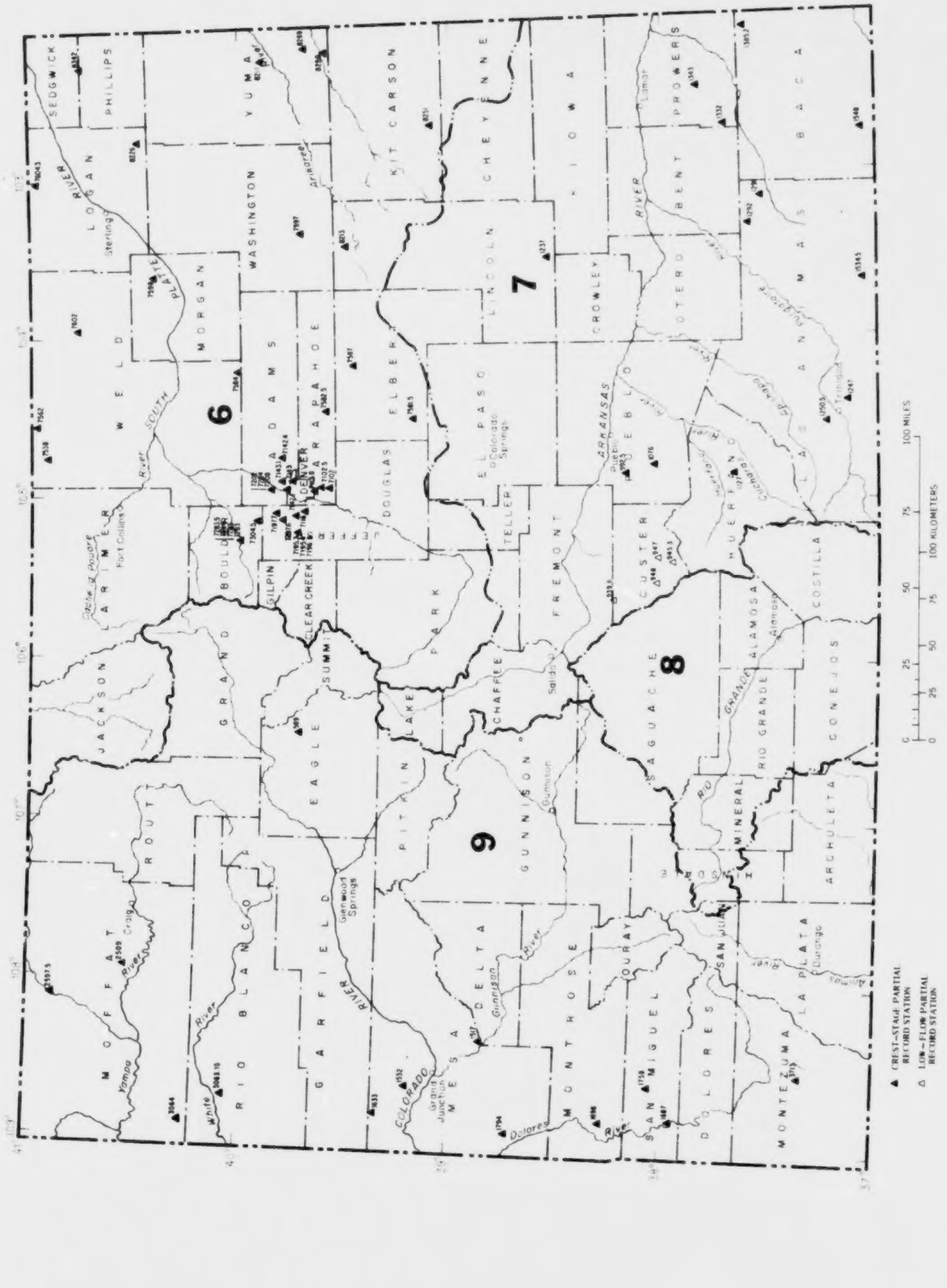
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OURAY
SAN MIGUEL
DOLORES
SAN JUAN
HINSDALE
MINERAL
RIO GRANDE
CONEJOS
ARCHULETA
LA PLATA
MONTEZUMA
6
7
8
9
Sterling
Fort Collins
Colorado Springs
Pueblo
Salida
Gunnison
Glenwood Springs
Grand Junction
Craig
Durango
Lamar
Trinidad
SOUTH PLATTE RIVER
ARKANSAS RIVER
RIO GRANDE
COLORADO RIVER
Yampa River
White River
Gunnison River
Dolores River
Cache la Poudre
0 25 50 75 100 MILES
0 25 50 75 100 KILOMETERS
▲ CREST-STAGE PARTIAL RECORD STATION
△ LOW-FLOW PARTIAL RECORD STATION

Figure 2.--Map showing locations of crest-stage partial-record stations in Colorado.

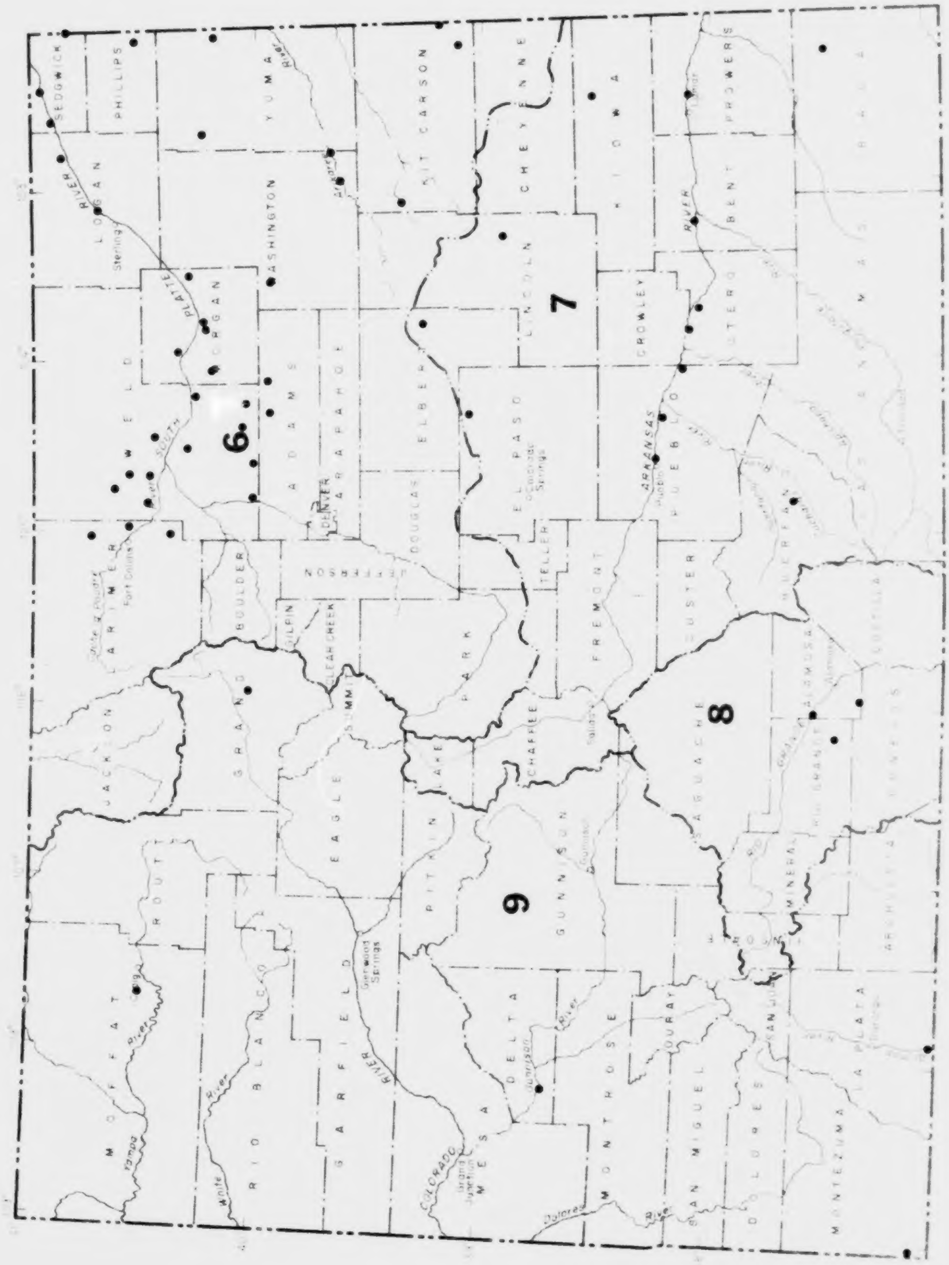
SEDGWICK
PHILLIPS
LOGAN
Sterling
YUMA
KIT CARSON
CHEYENNE
KIOWA
PROWERS
BACA
BENT
OTERO
CROWLEY
LINCOLN
7
WASHINGTON
MORGAN
WELD
6
ADAMS
ARAPAHOE
ELBERT
EL PASO
Colorado Springs
PUEBLO
Pueblo
ARKANSAS RIVER
LAS ANIMAS
HUERFANO
CUSTER
FREMONT
TELLER
DOUGLAS
JEFFERSON
DENVER
BOULDER
LARIMER
Fort Collins
SOUTH PLATTE RIVER
GILPIN
CLEAR CREEK
PARK
GRAND
JACKSON
SUMMIT
EAGLE
LAKE
CHAFFEE
SAGUACHE
8
ALAMOSA
COSTILLA
CONEJOS
RIO GRANDE
MINERAL
ARCHULETA
LA PLATA
MONTEZUMA
DOLORES
SAN MIGUEL
SAN JUAN
OURAY
HINSDALE
MONTROSE
GUNNISON
9
PITKIN
DELTA
MESA
Grand Junction
COLORADO RIVER
GARFIELD
Glenwood Springs
RIO BLANCO
White River
ROUTT
MOFFAT
Yampa River
0 25 50 75 100 MILES
0 25 50 75 100 KILOMETERS

Figure 3.--Map showing locations of observation wells in Colorado.

COOPERATION

The U.S. Geological Survey and organizations of the State of Colorado have had cooperative agreements for the systematic collection of surface-water records since 1895, and for water-quality records since 1941. Organizations that assisted in collecting data for this report through cooperative agreement with the Survey are:

Colorado Division of Water Resources, C. J. Kuiper, State Engineer.
Colorado Water Conservation Board, F. L. Sparks, Director.
Colorado Department of Highways, Jack Kinstlinger, Executive Director.
Arkansas River Compact Administration, Frank G. Cooley, Chairman and Federal Representative.
Colorado River Water Conservation District, Roland C. Fischer,
Metropolitan Denver Sewage Disposal District No. 1, William E. Dorbitz, Manager.
Northern Colorado Water Conservation District, E. F. Phipps, Secretary-Manager.
Purgatoire River Water Conservancy District, Clyde Dawn, President. Secretary-Engineer.
Southwestern Water Conservation District, Robert H. Tyner, Manager.
Southeastern Colorado Water Conservancy District, C. L. Thomson, General Manager.
St. Vrain and Left Hand Water Conservancy District, James A. Cinea, Executive Director.
City and County of Denver, Board of Water Commissioners, Charles F. Brannan, President.
Eagle County Commissioners, Dale F. Grant, Chairman.
Pitkin County Board of County Commissioners, George Ochs, County Manager
City of Aspen, Phillip Mahoney, City Manager.
City of Aurora, C. A. Wemlinger, Director of Utilities.
Colorado City Water and Sanitation District, D. E. Cady, District Administrator.
City of Colorado Springs, Department of Public Utilities, James D. Phillips, Director.
City of Fort Collins, Roger E. Krempel, Director of Utilities.
City of Glenwood Springs, John D. West, Manager.

Financial assistance was also provided by the U.S. Army, Corps of Engineers, U.S. Army; Bureau of Indian Affairs, Bureau of Land Management, Bureau of Mines, Bureau of Reclamation, and the National Park Service, U.S. Department of the Interior; and the U.S.Environmental Protection Agency. Organizations that supplied data are acknowledged in station descriptions.

Some records have been collected and computed by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control.

HYDROLOGIC CONDITIONS

Water year 1978 was a year of extremes. The winter snowpack ranged from near 80 percent of normal in the Rio Grande basin to 150 percent of normal in the Yampa and White River basins. The summer was drier and warmer than usual with Denver recording a record of 52 days above 90 degrees. Streamflow varied from about 75 percent of normal in the southeast to about 150 percent of normal in the northwest part of the state.

Ground-water levels continued to decline in the northern High Plains, but remained constant in the alluvial river-channel aquifers.

NOTICE

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year, and therefore, it first appears in this publication. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

DEFINITION OF TERMS

Terms related to streamflow, water quality, and other hydrologic data as used in this report are defined below. See also the table for converting English units to metric units (International System, SI, units) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials, for example, by decomposing organic matter into a form available for reuse by plants.

> Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals; their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours, at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Biomass is the amount of living matter present at any given time, expressed as the weight per unit area of volume of habitat.

Ash weight is the weight of amount of residue present after the residue from the dry weight determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash weight values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (grams per square meter).

Dry weight refers to the weight of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the weight remains unchanged. This weight represents the total organic matter, ash and sediments, in the sample. Dry weight values are expressed in the same units as ash weight.

Organic weight or volatile weight of the living substance is the difference between the dry weight and the ash weight, and represents the actual weight of the living matter. The organic weight is expressed in the same units as for ash and dry weights.

Wet weight is the weight of living matter plus contained water.

Bottom material See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters(L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile, or 0.3468 millimeter from 1 square kilometer.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (cfs, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved oxygen (DO) is the dissolved-oxygen content of water in equilibrium with air is a function of atmospheric pressure, and temperature and dissolved-solids content of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant effect. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen content in water from some streams.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is the physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Micrograms per liter (UG/L, μg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixturn.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multi-ply by	Ion	Multi-ply by
Aluminum (Al^{+3})*	0.11119	Iodide (I^{-1})	0.00788
Ammonia as N	.07143	Iron (Fe^{+3})*	.05372
Barium (Ba^{+2})	.01456	Lead (Pb^{+2})*	.00965
Bicarbonate (HCO_3^{-1})	.01639	Lithium (Li^{+1})*	.14411
Bromide (Br^{-1})	.01251	Magnesium (Mg^{+2})	.08226
Calcium (Ca^{+2})	.04990	Manganese (Mn^{+2})*	.03640
Carbonate (CO_3^{-2})	.03333	Nickel (Ni^{+2})*	.03406
Chloride (Cl^{-1})	.02821	Nitrate as N	.07143
Chromium (Cr^{+6})*	.11539	Nitrite as N	.07143
Cobalt (Co^{+2})*	.03394	Phosphate,ortho as P	.09686
Copper (Cu^{+2})*	.03148	Potassium (K^{+1})	.02557
Cyanide (CN^{-1})	.03844	Sodium (Na^{+1})	.04350
Fluoride (F^{-1})	.05264	Strontium (Sr^{+2})*	.02283
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{-2})	.02082
Hydroxide (OH^{-1})	.05880	Zinc (ZN^{+2})*	.03060

*Constituents reported in micrograms per liter; multiply by factor and divide results by 1,000.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million*
(All values calculated to three significant figures)

Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-533	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/mL and a specific gravity of sediment of 2.65.

Particle-size classification, as used in this report, agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay............	0.00024 - 0.004	Sedimentation
Silt............	.004 - .062	Sedimentation
Sand............	.062 - 2.0	Sedimentation or sieve
Gravel..........	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticide network is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per mL of sample.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. These compounds are similar in structure to organochlorine insecticides.

Radiochemical network is a network of regularly sampled water-quality stations where samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose and Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are natural uranium in μg/L (micrograms per liter), radium as radium-226 in PC/L (pCi/L, picocuries per liter), gross beta radiation as equivalent strontium/yttrium-90 or cesium-137 in PC/L, and gross alpha radiation as micrograms of uranium equivalent per liter (ug/L). Gross alpha and beta radioactivity associated with the fine-grained (silt and clay-sized) sediments in the samples are also determined.

Recoverable from bottom material the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. Suspended-sediment discharge in tons per day is computed by multiplying discharge times mg/L times 0.0027.

Total sediment discharge or total sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft or 0.09 m above the bed) expressed as milligrams of dry sediments per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known expecially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks and is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos per centimeter at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and the volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended, recoverable the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) *dissolved* and (2) *total* concentrations of the constituent.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in tons (0.9072 tonnes) in 1 acre-foot (1,233 m^3) of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension in tons (0.9072 tonnes) that passes a stream section during a 24-hour period.

Total the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total in bottom material the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total, recoverable the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1977, is called the "1977 water year."

Weighted average is used in this report to indicate the discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WDR is an abbreviation for "Water-Data Report" in the summary REVISIONS paragraph to refer to State annual basic-data reports published after 1974.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to State annual basic-data reports published prior to 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Irrigation-network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, the data for these stations were published in the annual Water-Supply Paper series, "Quality of Surface Water for Irrigation, Western States."

National stream-quality accounting network is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are: (1) To depict areal variability of water-quality conditions nationwide on a year-by-year basis, and (2) to detect and assess long-term changes in stream quality.

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station and each partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station.

Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 07083000, which appears just to the left of the station name, includes the 2-digit part number "07" plus the 6-digit downstream order number "083000." In this report the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are for Part 6 (Missouri River basin), Part 7 (Lower Mississippi River basin), and Part 8 (Western Gulf of Mexico basins). Records for Part 9 (Colorado River Basin) are in Volumes 2 and 3. All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER RECORDS

Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 5-, 15-, 30- or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, Book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current water year is shown on the inside of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions or previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available.

River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies.

Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)," that only the instantaneous minimum was revised; and "(P)," that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS."

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, availability of water-quality records, and reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or minimum contents), and the minimum gage height, if it is significant, are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). The first paragraph are extremes for period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR;" if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second (ft^3/s) during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month is also expressed in acre-feet (line headed "AC-FT"). In the yearly summary below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations and at miscellaneous sites are given in tables at the end of the gaging-station records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, the third is a table of storm precipitation and related runoff at storm-runoff partial-record stations, and the fourth is a table of discharge measurements at miscellaneous sites.

ACCURACY OF DATA

The accuracy of streamflow data depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" means within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second (ft^3/s) for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, evaporation, or other factors. However, because all the effects cannot be measured or evaluated, satisfactory adjustments generally cannot be made. For some stations, available figures of diversions or change in contents of reservoirs are included as supplemental data. Even at those stations where adjustments can be made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

PUBLICATIONS

In each Water-Supply Paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding Water-Supply Papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of Water-Supply Papers containing detailed information on major floods in the area. Records for stations in Colorado for the period October 1960 to September 1965 are in Water-Supply Papers 1918, 1919, 1921, 1923, 1924, and 1925; and for the period October 1965 to September 1970 are in Water-Supply Papers 2118, 2119, 2121, 2123, 2124, and 2125.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 to September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps where practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in Colorado are compiled in Water-Supply Papers 1310, 1311, 1312, and 1313 through September 1950; and in Water-Supply Papers 1730, 1731, 1732, and 1733 for October 1950 to September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

OTHER DATA AVAILABLE

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

Records of discharge not published by the Geological Survey were collected at many sites in Colorado during the water year by the following agencies: City of Colorado Springs; Colorado Division of Water Resources; Forest Service, U.S. Department of Agriculture; City and County of Denver, Board of Water Commissioners; National Weather Service, Department of Commerce; and Bureau of Reclamation, U.S. Department of the Interior.

EXPLANATION OF WATER-QUALITY RECORDS

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads.

Descriptive statements are given for water-quality stations located at or near streamflow stations. Information given includes the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical, biological, and microbiological quality, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium-absorption-ratio, specific conductance, and pH.

The biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/L) and water temperatures in degrees Celsius (°C). In waters with a density of 1.000 g/mL (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/mL, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperature reported in degrees Celsius may be converted to degrees Fahrenheit by using table 3.

TEMPERATURE

Water temperatures were measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken at about the same time each day when the sample is collected. At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day; stations equipped with noncontinuous digital monitors provide temperature records based on hourly punches.

Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C=5/9(°F-32°) or °F=9/5(°C)+32°.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definition of Terms," and table 5 for converting English units to SI units.)

SOLUTES

Most methods for collecting and analyzing water samples to determine the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). Analysis of pesticides and organic substances in water are described by Goerlitz and Lamar (1967), Lamar, Goerlitz, and Law (1965), and Goerlitz and Brown (1972). The collection and analysis of aquatic, biological, and microbiological samples are described by Slack and others (1973).

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between the reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with noncontinuous digital monitors, the records are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the Geological Survey district office at the address given on the back of the title page of this report.

SEDIMENT

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. A blank in the daily mean concentration column of the suspended-sediment discharge table indicates the value in the sediment discharge column was estimated. A zero value in the sediment discharge column when there are nonzero values in the mean discharge and mean concentration columns indicates the load is less than 0.005 tons per day.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the streams.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

WATER-SUPPLY PAPERS

The annual series of Water-Supply Papers that give information on quality of surface waters in Colorado Are shown in the following table:

Table 4.--Water-Supply Paper numbers and parts, water years 1941-71

Year	Part 6	Part 7	Part 8	Part 9	Irrigation (1951-65)[a]
1941	942	942	942	942	----
1942	950	950	950	950	----
1943	970	970	970	970	----
1944	1022	1022	1022	1022	----
1945	1030	1030	1030	1030	----
1946	1050	1050	1050	1050	----
1947	1102	1102	1102	1102	----
1948	1132	1133	1133	1133	----
1949	1162	1163	1163	1163	----
1950	1187	1188	1188	1189	----
1951	1198	1199	1199	1200	1264
1952	1251	1252	1252	1253	1362
1953	1291	1292	1292	1293	1380
1954	1351	1352	1352	1353	1430
1955	1401	1402	1402	1403	1465
1956	1451	1452	1452	1453	1485
1957	1521	1522	1522	1523	1524
1958	1572	1573	1573	1574	1575
1959	1643	1644	1644	1645	1699
1960	1743	1744	1744	1745	1745
1961	1883	1884	1884	1885	1886
1962	1943	1944	1944	1945	1946
1963	1949	1950	1950	1951	1952
1964	1956	1957	1957	1958	1960
1965	1963	1964	1964	1965	1967
1966	1993	1994	1994	1995	----
1967	2013	2014	2014	2015	----
1968	2095	2096	2097	2098	----
1969	2145	2146	2147	2148	----
1970	2155	2156	2157	2158	----
1971	[b]2165	[b]2166	[b]2167	[b]2168	----

[a] Annual series, "Quality of Surface Waters for Irrigation, Western States."

[b] In preparation.

Information about reports and other data on quality of water in Colorado may be obtained from the district office at the address given on the back of the title page of this report.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

COLLECTION OF DATA

Only ground-water-level data from a basic national network of observation wells are published in this report. These water-level measurements are intended to provide a record of water-level changes in important aquifers.

The locations of wells are referenced by two systems. One system is based on latitude and longitude, and the second is based on the U.S. Bureau of Land Management system of land subdivision. The latitude and longitude grid system facilitates machine processing of data and plotting of data points.

The latitude and longitude grid system is used to provide the geographic location of each well. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; N designates north; the next seven digits denote degrees, minutes, and seconds of longitude; and the last digit is a sequential number for wells within a 1-second grid, as shown below in figure 4.

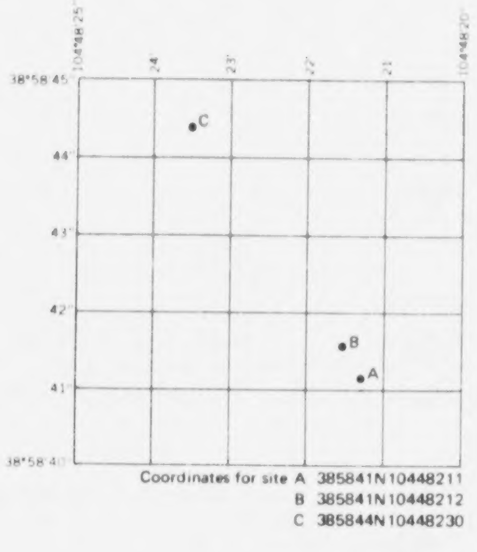
104°48'25"
24"
23"
22"
21"
104°48'20"
38°58'45"
44"
43"
42"
41"
38°58'40"
C
B
A
Coordinates for site A 385841N10448211
B 385841N10448212
C 385844N10448230

Figure 4.--System for numbering wells and miscellaneous sites (latitude and longitude).

The local well number locates a well within a 10-acre (4.0-ha) tract using the U.S. Bureau of Land Management system of land subdivision. The components of the local well number proceed from the largest to the smallest land subdivisions. This is in contrast to the legal description, which proceeds from the smallest to the largest land subdivision. The largest subdivision is the survey. Colorado is governed by three surveys: The Sixth Principal Meridian Survey (S), the New Mexico Survey (N), and the Ute Survey (U). Costilla County was not included in any of the above official surveys. This report follows the convention of the Costilla County Assessor in which the northern part of the county is governed by the Sixth Principal Meridian Survey and the southern part of the county is governed by a local system called the Costilla Survey (C). The first letter of the well location designates the survey.

A survey is subdivided into four quadrants formed by the intersection of the baseline and the principal meridian. The second letter of the well location designates the quadrant: A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. A quadrant is subdivided in the north-south direction every 6 mi (10 km) by townships and is subdivided in the east-west direction every 6 mi (10 km) by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi^2 (93-km^2) area described by the township and range designation is subdivided into 1-mi^2 (2.59-km^2) areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres (259 ha), is subdivided into quarter sections. The 160-acre (64.8-ha) area is designated by the first letter following the section: A indicates the northeast quarter, B the northwest, C the southwest, and D the southeast. The quarter section is subdivided into quarter-quarter sections. The 40-acre (16.2-ha) area is designated in the same manner by the second letter following the section. The quarter-quarter section is subdivided into quarter-quarter-quarter sections. The 10-acre (4.0-ha) area is designated in the same manner by the third letter following the section. If more than one well is located within the 10-acre (4.0-ha) tract, the wells are numbered sequentially in the order in which they were originally inventoried. If this number is necessary, it will follow the three-letter designation.

The local number is provided for continuity with older reports.

Measurements are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well insure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth of a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS

Publication of ground-water-level data for the United States in Water-Supply Papers was begun by the U.S. Geological Survey in 1935. From 1935 through 1939, a single Water-Supply Paper covering the entire nation was issued each year (Water-Supply Papers 777, 817, 840, 845, and 886). From 1940 through 1974, separate Water-Supply Papers were issued for six sections of the United States. Water-level data for Colorado are included in the Water-Supply Papers listed below, each report containing one or more calendar years (January through December) of data. Data in this report are for the 12-month water year ending September 30.

Calendar year	WSP no.	Calendar year	WSP no.	Calendar year	WSP no.	Calendar year	WSP no.
1940	910	1945	1027	1950	1169	1955	1408
1941	940	1946	1075	1951	1195	1956-60	1760
1942	948	1947	1100	1952	1225	1961-65	1845
1943	990	1948	1130	1953	1269	1966-70	1980
1944	1020	1949	1160	1954	1325		

Information about reports and other data on ground water in Colorado may be obtained from the district office at the address given on the back of the title page of this report.

SELECTED REFERENCES

The following publications are available for background information on the methods for collecting, analyzing, and evaluating the chemical and physical properties of surface waters:

American Public Health Association, and others, 1971, Standard methods for the examination of water and waste water, 13th ed: Am. Public Health Assoc., New York, 874 p.

Barker, F. B., and Johnson, J. O., 1964, Determination of radium in water: U.S. Geol. Survey Water-Supply Paper 1696-B, 29 p.

Barker, F. B., and others, 1965, Determination of uranium in natural water: U.S. Geol. Survey Water-Supply Paper 1696-C, 25 p.

Barker, F. B., and Robinson, B. P., 1963, Determination of beta activity in water: U.S. Geol. Survey Water-Supply Paper 1969-A, 32 p.

Barnett, P. R., and Mallory, E. C., Jr., 1971, Determination of minor elements in water by emission spectroscopy: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A2, 31 p.

Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap A1, 160 p.

Carter, R. W., and Davidian, Jacob, 1968, General procedures for gaging streams: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. A6, 13 p.

Clarke, F. W., 1924, The composition of the river and lake waters of the United States: U.S. Geol. Survey Prof. Paper 135, 199 p.

Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurements of sediment discharge: U.S. Geol. Survey Bull. 1181-A, 47 p.

Colby, B. R., and Hembree, C. H., 1955, Computations of total sediment discharge, Niobrara River near Cody, Nebraska: U.S. Geol. Survey Water-Supply Paper 1357, 187 p.

Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geol. Survey Water-Supply Paper 1593, 17 p.

Collins, W. D., and Howard, C. S., 1928, Quality of water of Colorado River in 1925-26: U.S. Geol. Survey Water-Supply Paper 596-B, p. 33-43.

Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.

Goerlitz, D. F., and Brown, Eugene, 1972, Methods for analysis of organic substances in water: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A3, 40 p.

Goerlitz, D. F., and Lamar, W. L., 1967, Determination of phenoxy acid herbicides in water by electron-capture and microcoulemetric gas chromatography: U.S. Geol. Survey Water-Supply Paper 1817-C, 21 p.

Gregg, D. O., and others, 1961, Public water supplies of Colorado (1959-60): Fort Collins, Colorado State Univ. Agr. Expt. Sta., Gen. Ser. 757, 128 p.

Guy, H. P., 1970, Fluvial sediment concepts: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C1, 55 p.

_____1969, Laboratory theory and methods for sediment analysis: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C1, 57 p.

Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluial sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C2, 59 p.

Hem, John D., 1970, Study and interpretation of the chemical characteristics of natural water, 2d ed.: U.S. Geol. Survey Water-Supply Paper 1473, 363 p.

Howard, C. W., 1955, Quality of water of the Colorado River, 1925-40: U.S. Geol. Survey open-file report, 103 p.

Iorns, W. V., and others, 1964, Water resources of the Upper Colorado River Basin--basin data: U.S. Geol Survey Prof. Paper 442, 1,036 p., 4 pls., 1 fig.

_____1965, Water Resources of the Upper Colorado River Basin--technical report: U.S. Geol. Survey Prof. Paper 441, 370 p., 9 pls., 147 figs.

Lamar, W. L., Goerlitz, D. F., and Law, L. M., 1965, Identification and measurement of chlorinated organic pesticides in water by electron-capture gas chromatography: U.S. Geol. Survey Water-Supply Paper 1817-B, 12 p.

Lane, E. W., and others, 1947, Reports of Subcommittee on terminology: Am. Geophys. Union Trans., v. 28, p. 937.

Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

Lohman, S. W., and others, 1972, Definitions of selected ground-water terms--revisions and conceptual refinements: U.S. Geol. Survey Water-Supply Paper 1988, p. 2.

McGuinness, C. L., 1963, The role of ground water in the national water situation: U.S. Geol. Survey Water-Supply Paper 1800, 1121 p.

Meinzer, O. E., 1923, The occurrence of ground water in the United States: U.S. Geol. Survey Water-Supply Paper 489, 321 p.

_____1923, Outline of ground-water hydrology, with definitions: U.S. Geol. Survey Water-Supply Paper 494, 71 p.

Porterfield, George, 1972, Computations of fluvial-sediment discharge: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C3, 66 p.

Ritter, J. R., and Helley, E. J., 1969, Optical method for determining particle sizes of coarse sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C3, 33 p. (Open-file)

Rose, Arthur, and Rose, Elizabeth (Gates), 1966, The condensed chemical dictionary: New York, Reinhold Pub. Corp., 7th ed., 1044 p.

Slack, K. V., and others, 1973, Methods for collection and analysis of aquatic biological and microbiological samples: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A4, 165 p.

Stabler, Herman, 1911, Some stream waters of the western United States: U.S. Geol. Survey Water-Supply Paper 274, 188 p.

U.S. Inter-Agency Committee on Water Resources, A study of methods used in measurements and analysis of sediment loads in streams:

Report 11, 1957, The development and calibration of visual accumulation tube: St. Anthony Falls Hydraulic Lab., Minneapolis, Minn., 109 p. 43 figs.

Report 12, 1957, Some fundamentals of particle-size analysis: Washington, D. C., U.S. Govt. Printing Office, 55 p., 9 figs.

Report AA, 1959, Federal Inter-Agency sedimentation instruments and reports: St. Anthony Falls Hydraulic Lab., Minneapolis, Minn., 41 p., 27 figs.

Report 13, 1961, The single-stage sampler for suspended sediment: Washington, D. C., U.S. Govt. Printing Office, 105 p., 51 figs.

Report 14, 1963, Determinations of fluvial sediment discharge: Washington, D. C., U.S. Govt. Printing Office, 151 p., 70 figs.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-one manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publications, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Picket Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 p. $1.60.

2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.

2-E1. Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.

3-A1. General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. $0.25.

3-A2. Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.20.

3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4. Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.30.

3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $0.20.

3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $0.45.

3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11. Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $0.40.

3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. Introduction to ground-water hydraulics-a programed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.

3-C2. Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $0.70.

3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $1.15.

4-A1. Some statistical tools in hydrology, By H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $0.30.

4-A2. Frequency curves, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.20.

4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. $0.65.

4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.75.

4-D1. Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $0.65.

5-A1. Methods for collection and analysis of water samples for dissolved minerals and gases, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, by K. V. Slack, R. C. Averett, P. E. Greeson, and R. G. Lipscomb: USGS--TWRI Book 5, Chapter A4. 1973. 165 pages. $1.95.

5-C1. Laboratory theory and methods for sediment analysis, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $0.65.

7-C1. Finite-difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $0.40.

APPENDIX

NUMERIC LISTING

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)

NUMERIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)

ALPHABETIC LISTING

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--CONTINUED

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--CONTINUED

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)

ALPHABETIC LISTING--CONTINUED

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)

COLORADO RIVER MAIN STEM

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO

LOCATION.--Lat 40°19'33", long 105°51'22", in NE¼NW¼ sec.12, T.4 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft (150 m) downstream from Baker Gulch, 1.0 mi (1.6 km) upstream from Bowen Gulch, and 5.5 mi (8.8 km) northwest of town of Grand Lake.

DRAINAGE AREA.--53.4 mi^2 (138 km^2).

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,750 ft (2,667 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversion above station by Grand River ditch (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 61.6 ft^3/s (1.745 m^3/s), 44,630 acre-ft/yr (55.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 976 ft^3/s (27.6 m^3/s) June 30, 1957, gage height, 7.19 ft (2.192 m); maximum gage height, 7.30 ft (2.225 m) June 25, 1971; minimum daily discharge, 3.0 ft^3/s (0.085 m^3/s) Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 792 ft^3/s (22.4 m^3/s) at 0100 June 16, gage height, 7.18 ft (2.188 m); minimum daily, 4.4 ft^3/s (0.12 m^3/s) Dec. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	20	11	4.6	4.6	4.6	18	55	252	450	71	21
2	14	27	11	4.6	4.6	4.6	20	55	269	406	67	20
3	13	24	11	4.6	4.6	4.6	22	62	265	391	59	20
4	13	23	11	4.6	4.6	4.8	24	55	283	351	53	20
5	18	23	11	4.6	4.6	4.8	25	49	300	311	49	21
6	27	23	11	4.6	4.6	4.8	26	48	285	273	45	25
7	49	22	11	4.6	4.6	5.0	39	46	352	248	46	27
8	32	22	11	4.6	4.6	5.0	45	42	354	238	43	28
9	27	25	11	4.6	4.6	5.0	35	53	408	229	41	28
10	27	19	11	4.6	4.6	5.0	54	48	566	222	38	29
11	22	19	11	4.6	4.6	5.0	46	57	691	223	36	27
12	23	18	11	4.6	4.6	5.0	42	58	656	239	36	19
13	24	22	11	4.6	4.6	5.0	48	71	662	213	38	19
14	23	21	11	4.6	4.6	5.0	28	116	696	193	44	20
15	23	17	11	4.6	4.6	5.0	33	189	718	175	44	21
16	23	16	10	4.6	4.6	5.0	47	260	749	183	36	21
17	24	16	9.0	4.6	4.6	5.2	35	241	732	207	31	25
18	24	17	8.2	4.6	4.6	5.2	32	213	667	177	30	27
19	24	17	7.0	4.6	4.6	5.4	53	173	615	147	30	29
20	24	17	6.8	4.6	4.6	5.6	47	187	557	135	27	32
21	30	18	6.2	4.6	4.6	5.8	42	206	547	124	26	29
22	29	18	5.8	4.6	4.6	6.0	36	241	547	112	25	29
23	26	17	5.4	4.6	4.6	6.0	33	282	589	102	25	27
24	25	16	5.0	4.6	4.6	6.4	35	321	643	95	23	23
25	24	15	4.6	4.6	4.6	7.4	45	343	669	87	22	20
26	23	14	4.6	4.6	4.6	9.0	56	313	597	81	22	17
27	23	13	4.6	4.6	4.6	10	68	306	513	76	21	15
28	22	12	4.4	4.6	4.6	12	65	276	479	73	20	14
29	22	11	4.4	4.6	---	14	60	239	474	99	20	18
30	24	11	4.6	4.6	---	16	61	267	516	92	20	18
31	23	---	4.6	4.6	---	17	---	309	---	73	20	---
TOTAL	740	553	260.2	142.6	128.8	209.2	1220	5181	15651	6025	1108	689
MEAN	23.9	18.4	8.39	4.60	4.60	6.75	40.7	167	522	194	35.7	23.0
MAX	49	27	11	4.6	4.6	17	68	343	749	450	71	32
MIN	13	11	4.4	4.6	4.6	4.6	18	42	252	73	20	14
AC-FT	1470	1100	516	283	255	415	2420	10280	31040	11950	2200	1370

CAL YR 1977 TOTAL 13035.6 MEAN 35.7 MAX 270 MIN 3.3 AC-FT 25860
WTR YR 1978 TOTAL 31907.8 MEAN 87.4 MAX 749 MIN 4.4 AC-FT 63290

09011000 COLORADO RIVER NEAR GRAND LAKE, CO

LOCATION.--Lat 40°13'08", long 105°51'25", in NE¼SW¼ sec.13, T.3 N., R.76 W., Grand County, Hydrologic unit 14010001, on left bank 200 ft (61 m) downstream from bridge on U.S. Highway 34, 400 ft (120 m) upstream from high-water line of Shadow Mountain Lake at elevation 8,367 ft (2,550.3 m), and 3.0 mi (4.8 km) southwest of town of Grand Lake.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--July 1904 to September 1918, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as Grand River (North Fork) near Grand Lake 1904 and as North Fork of Grand River near Grand Lake 1905-18.

REVISED RECORDS.--WSP 1213: 1914. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,380 ft (2,554 m), from topographic map. Prior to June 15, 1934, nonrecording gage at same site and datum. June 15, 1934, to Sept. 26, 1944, water-stage recorder at site 1,100 ft (340 m) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 200 acres (809,000 m²) of hay meadows above station and about 2,000 acres (8.09 km²) below. Transmountain diversion above station by Grand River ditch through La Poudre Pass to Cache la Poudre River basin (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--59 years (water years 1905-18, 1934-78), 90.5 ft³/s (2.563 m³/s), 65,570 acre-ft/yr (80.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,840 ft³/s (52.1 m³/s) June 15, 16, 1918, gage height, 7.0 ft (2.13 m), from rating curve extended above 1,100 ft³/s (31 m³/s); maximum gage height, 8.21 ft (2.502 m) Apr. 20, 1971 (backwater from ice); minimum daily discharge, 1.7 ft³/s (0.048 m³/s) July 18, 19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 936 ft³/s (26.5 m³s) at 1200 June 14, gage height, 6.43 ft (1.960 m); minimum daily, 9.0 ft³/s (0.25 m³/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	20	14	15	13	36	105	396	465	79	24
2	22	36	20	15	14	13	39	102	382	404	82	23
3	20	30	18	15	14	13	40	124	367	390	69	22
4	19	30	20	16	14	13	45	110	348	349	53	22
5	23	29	20	16	14	13	49	95	374	305	57	21
6	34	29	20	16	14	13	47	84	357	258	53	20
7	57	28	21	16	13	13	64	78	388	213	54	22
8	51	28	20	16	13	13	66	75	419	185	53	21
9	39	27	20	16	13	13	59	72	431	175	51	21
10	37	29	20	15	13	13	68	90	538	143	47	22
11	31	31	19	15	13	14	56	111	703	142	45	24
12	30	33	19	15	14	14	65	120	733	151	44	26
13	30	30	19	15	14	14	68	140	745	140	46	24
14	30	25	19	15	14	15	60	202	860	118	54	23
15	31	22	19	15	15	15	61	290	831	95	56	22
16	31	21	19	15	15	15	65	389	878	97	48	22
17	31	20	19	15	15	16	67	409	859	108	40	23
18	31	21	19	16	15	16	57	316	739	99	37	26
19	31	23	18	15	14	16	57	286	678	68	38	28
20	31	24	18	14	14	16	63	299	632	52	36	34
21	37	25	18	15	14	17	69	351	607	44	35	33
22	41	25	18	14	14	17	72	382	584	34	33	34
23	35	25	17	14	14	18	65	441	595	24	33	33
24	33	24	17	14	13	18	66	472	647	19	31	31
25	32	22	17	14	13	18	86	504	679	15	30	28
26	30	22	17	14	14	18	101	476	640	12	29	26
27	30	21	16	15	13	20	119	469	546	10	28	25
28	30	21	16	14	13	23	121	446	507	9.0	26	24
29	29	21	14	14	---	25	114	397	479	11	25	24
30	31	21	14	14	---	28	115	405	492	59	25	26
31	32	---	14	15	---	31	---	461	---	86	24	---
TOTAL	992	773	565	462	388	514	2060	8301	17434	4280.0	1373	754
MEAN	32.0	25.8	18.2	14.9	13.9	16.6	68.7	268	581	138	44.3	25.1
MAX	57	36	21	16	15	31	121	504	878	465	82	34
MIN	19	20	14	14	13	13	36	72	348	9.0	24	20
AC-FT	1970	1530	1120	916	770	1020	4090	16470	34580	8490	2720	1500

CAL YR 1977 TOTAL 10760.5 MEAN 29.5 MAX 189 MIN 3.6 AC-FT 21340
WTR YR 1978 TOTAL 37896.0 MEAN 104 MAX 878 MIN 9.0 AC-FT 75170

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO

LOCATION.--Lat 40°19'40", long 105°34'39", in SW¼NW¼ sec.9, T.4 N., R.73 W., Larimer County, Hydrologic Unit 10190006, on right bank at upstream end of Aspen Creek siphon, 700 ft (210 m) downstream from east portal, and 4.5 mi (7.2 km) southwest of Estes Park.

WATER-QUALITY RECORDS

PERIOD OF RECORD. September 1970 to current year.

REMARKS.--Field data collected prior to 1974 water year are available in district office. This is a transmountain diversion from Grank Lake and Shadow Mountain Lake for power and irrigation developments in the South Platte River basin as part of the Colorado-Big Thompson project. Monthly diversion totals are given on pp. 347-349.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 16...	1115	487	49	7.5	8.0	8.3	--	--	21	0	6.4
NOV 16...	1300	514	51	7.2	5.0	7.6	--	--	21	0	6.3
DEC 09...	1250	421	52	7.5	2.5	8.4	58	K1	24	2	7.2
JAN 19...	0850	502	60	7.6	1.5	8.8	K13	K5	--	--	--
FEB 08...	1440	542	60	7.4	1.5	7.8	K18	K2	--	--	--
MAR 08...	1230	483	60	7.3	2.0	8.0	K12	K2	28	7	8.1
APR 12...	0820	551	60	7.2	3.0	8.1	K3	<1	25	0	7.6
MAY 10...	1410	536	55	7.3	5.0	7.4	K2	<1	25	1	7.9
JUN 06...	1330	421	41	7.2	7.5	8.4	K220	K1	19	3	5.1
JUL 20...	1630	423	18	7.2	14.0	7.8	K5	K1	6	0	1.8
AUG 23...	1000	540	35	7.8	14.0	7.3	75	K6	14	0	4.3

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 16...	1.2	1.7	.2	.7	25	0	21	7.8	.4	.1
NOV 16...	1.2	1.7	.2	.7	25	0	21	4.3	.4	.1
DEC 09...	1.4	1.7	.2	.8	27	0	22	3.6	.3	.1
JAN 19...	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 08...	1.8	2.3	.2	.9	25	0	21	5.5	.7	.2
APR 12...	1.5	1.9	.2	.9	31	0	25	3.0	.4	.1
MAY 10...	1.3	1.9	.2	.8	29	0	24	4.5	.5	.2
JUN 06...	1.0	1.9	.2	.7	20	0	16	4.5	.4	.1
JUL 20...	.3	.9	.2	.2	7	0	6	4.1	.2	.1
AUG 23...	.8	1.5	.2	.5	17	0	14	2.5	.2	.1

K BASED ON NON-IDEAL COLONY COUNT.

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT										
16...	3.9	35	.05	46.0	--	.02	--	--	--	--
NOV										
16...	4.3	32	.04	44.4	--	.06	--	--	--	--
DEC										
09...	4.2	33	.04	37.5	--	.15	--	--	--	--
JAN										
19...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	5.7	39	.05	50.9	.20	.21	--	.02	.22	.07
APR										
12...	5.5	37	.05	59.5	--	.16	.00	--	--	.02
MAY										
10...	16	48	.07	69.5	.14	.11	--	.20	.34	.02
JUN										
06...	5.4	30	.04	34.1	--	.07	--	--	--	--
JUL										
20...	4.2	16	.02	18.3	.01	.09	--	.33	.34	.02
AUG										
23...	4.4	23	.03	33.5	.01	.02	--	.47	.48	.03

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT								
16...	1115	--	--	30	--	0	--	--
NOV								
16...	1300	--	--	40	--	0	--	--
DEC								
09...	1250	--	--	100	--	4	--	--
MAR								
08...	1230	--	--	170	--	0	--	--
APR								
12...	0820	--	--	110	--	0	--	--
MAY								
10...	1410	1	0	90	3	10	0	0
JUN								
06...	1330	--	--	100	--	5	--	--
JUL								
20...	1630	--	--	70	--	0	--	--
AUG								
23...	1000	--	--	110	--	2	--	--

RESERVOIRS IN COLORADO RIVER BASIN, CO

09014500 SHADOW MOUNTAIN LAKE.--Lat 40°12'26", long 105°50'27", in SW¼NW¼ sec.19, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, in gate house on left side of outlet gates near center of Shadow Mountain Dam on Colorado River, 1.0 mi (1.6 km) upstream from Pole Creek and 3.2 mi (5.1 km) south of town of Grand Lake. DRAINAGE AREA, 185 mi² (479 km²). PERIOD OF RECORD, April 1947 to current year. Prior to October 1960, published as Shadow Mountain Reservoir near Grand Lake. REVISED RECORDS, WSP 1149: 1947-48. WSP 2124: Drainage area. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD. Supplementary water-stage recorder on Grand Lake, 800 ft (240 m) north of outlet gates and 2.9 mi (4.7 km) north of Shadow Mountain Dam.

Lake is formed by earth and rockfill dam and dikes. Storage began in April 1947. Capacity, 17,860 acre-ft (22.0 hm³), including usable capacity of Grand Lake above elevation 8,365 ft (2,549.7 m) between elevation 8,347 ft (2,544.2 m), sill of outlet gate, and 8,367 ft (2,550.3 m), maximum water surface. Dead storage in Shadow Mountain Lake, 506 acre-ft (624,000 m³). Dead storage in Grand Lake not determined. Shadow Mountain Lake is used for stabilization of water level in Grand Lake. Usable capacity for diversion through Alva B. Adams tunnel, 3,660 acre-ft (4.51 hm³) between elevations 8,365 ft (2,549.7 m), crest of tunnel inlet, and 8,367 ft (2,550.3 m), maximum water surface. Figures given represent usable contents as determined from summation of individual contents of Grand Lake and Shadow Mountain Lake. Transmountain diversion from Colorado River basin, including water pumped from Lake Granby, is effected through Grand Lake and Alva B. Adams tunnel, for power and irrigation in South Platte River basin. Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 17,920 acre-ft (22.1 hm³) May 22, 1955, elevation, 8,367.03 ft (2,550.271 m); minimum since appreciable storage was first attained, 2,630 acre-ft (3.24 hm³) May 14, 1948.

EXTREMES FOR CURRENT YEAR: Maximum contents, 17,460 acre-ft (21.5 hm³) Oct. 16, elevation, 8,366.87 ft (2,550.222 m); minimum, 16,000 acre-ft (19.7 hm³) June 11, elevation, 8,365.78 ft (2,549.890 m).

09018500 LAKE GRANBY.--Lat 40°10'55", long 105°52'14", in NW¼NE¼ sec.35, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, in Granby pumping plant at north shore of lake, 2.5 mi (4.0 km) north of Granby Dam on Colorado River and 7.5 mi (12.1 km) northeast of Granby. DRAINAGE AREA, 312 mi² (808 km²). PERIOD OF RECORD, October 1949 to current year. Prior to October 1955, published as Granby Reservoir near Granby. REVISED RECORDS, WSP 2124: Drainage area. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD. Prior to Apr. 9, 1951, nonrecording gage at dam at same datum.

Reservoir is earthfill dam and dikes. Regulation began Sept. 13, 1949, and usable storage began June 14, 1950, while dam was under construction. Usable capacity, 465,600 acre-ft (574 hm³) between elevations 8,186.00 ft (2,495.093 m), trash rack sill at outlet, and 8,280.00 ft (2,523.744 m), top of radial spillway gates. Dead storage, 74,190 acre-ft (91.5 hm³). Figures given represent usable contents. Lake is used to store water for pumping to Shadow Mountain Lake for transmountain diversion through Alva B. Adams tunnel for power and irrigation in South Platte River basin. Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 465,900 acre-ft (574 hm³) July 13, 1962, elevation, 8,280.05 ft (2,523.759 m); minimum since appreciable storage was attained, 13,070 acre-ft (16.1 hm³) Apr. 16, 1978, elevation, 8,190.93 ft (2,496.595 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 270,100 acre-ft (333 hm³) July 24, elevation, 8,250.20 ft (2,514.661 m); minimum, 13,070 acre-ft (16.1 hm³) Apr. 16, elevation, 8,190.93 ft (2,496.595 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	09014500 SHADOW MOUNTAIN LAKE			09018500 LAKE GRANBY		
Sept. 30.	8,366.75	17,410	-	8,227.83	152,000	-
Oct. 31.	8,366.65	17,240	-170	8,224.91	138,500	-13,500
Nov. 30.	8,366.81	17,510	+270	8,221.90	125,000	-13,500
Dec. 31.	8,366.68	17,280	-230	8,216.14	100,400	-24,600
CAL YR 1977	-	-	+130	-	-	-143,800
Jan. 31.	8,366.58	17,100	-180	8,209.80	75,280	-25,120
Feb. 28.	8,366.75	17,380	+280	8,202.76	49,790	-25,490
Mar. 31.	8,366.77	17,400	+20	8,194.29	22,700	-27,090
Apr. 30.	8,366.60	17,090	-310	8,193.75	21,110	-1,590
May 31.	8,366.62	17,180	+90	8,206.11	68,920	+47,810
June 30.	8,366.40	16,870	-310	8,241.97	223,700	+154,800
July 31.	8,366.66	17,230	+360	8,250.01	269,000	+45,300
Aug. 31.	8,366.85	17,520	+290	8,246.45	248,500	-20,500
Sept. 30.	8,366.60	17,130	-390	8,242.15	224,700	-23,800
WTR YR 1978	-	-	-280	-	-	+72,720

09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1970 to September 1975, March 1978 to September 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
MAR												
15...	1130	E280	65	7.4	2.0	8.2	<1	<1	.14	.30	.44	.08
APR												
29...	1545	E300	80	8.0	7.5	7.8	23	<1	.08	.72	.80	.07
SEP												
20...	1500	325	60	7.3	11.5	5.2	43	<1	.09	.28	.37	.02

E ESTIMATED.

09019000 COLORADO RIVER BELOW LAKE GRANBY, CO

LOCATION.--Lat 40°08'39", long 105°52'00", in SE¼SE¼ sec.11, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi (0.5 km) downstream from Granby Dam, 1.0 mi (1.6 km) upstream from Walden Hollow, and 5.0 mi (8.0 km) northeast of Granby.

DRAINAGE AREA.--312 mi^2 (808 km^2).

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1955, published as "below Granby Reservoir."

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 8,050 ft (2,454 m), from topographic map.

REMARKS.--Records excellent. Seepage from Lake Granby, which varies from 2 to 8 ft^3/s (0.06 to 0.23 m^3/s) depending on elevation of Lake Granby, is not included in record. Flow completely regulated by Lake Granby (station 09018500). Several diversions for irrigation of hay meadows above station. Transmountain diversions by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--28 years, 45.8 ft^3/s (1.297 m^3/s) 33,180 acre-ft/yr (40.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,520 ft^3/s (43.0 m^3/s) June 27-30, 1971, gage height, 3.95 ft (1.204 m); maximum gage height, 4.09 ft (1.247 m) July 3, 1973; minimum daily discharge, 5.1 ft^3/s (0.14 m^3/s) Oct. 8, 9, 1970, Sept. 3, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft^3/s (2.92 m^3/s) July 23-27, gage height, 1.85 ft (0.564 m); minimum daily, 10 ft^3/s (0.28 m^3/s) Oct. 16-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	19	20	19	19	20	50	92	87	57	24
2	11	19	19	20	19	19	20	73	92	87	44	28
3	11	18	19	20	19	19	21	75	92	90	43	38
4	11	18	19	20	19	19	20	75	91	91	43	38
5	11	18	19	20	19	19	19	76	90	93	43	30
6	11	18	19	20	19	19	19	76	90	94	43	27
7	11	18	19	20	19	19	19	76	91	94	43	29
8	11	18	19	20	19	19	19	76	91	94	43	26
9	11	18	19	20	19	19	19	76	91	94	43	26
10	11	18	19	20	19	19	19	76	92	95	43	26
11	11	18	19	20	19	19	19	76	92	95	43	25
12	11	18	19	20	19	19	19	76	93	96	43	23
13	11	18	19	20	19	19	19	76	94	97	43	26
14	11	18	19	19	19	19	19	76	95	99	40	29
15	11	18	19	19	19	19	19	76	96	99	39	29
16	10	19	19	19	19	19	19	76	96	99	41	29
17	10	19	19	19	19	19	19	76	96	99	41	29
18	10	19	19	19	19	19	19	77	96	99	41	29
19	10	19	20	19	19	19	19	77	96	99	41	29
20	11	19	20	19	19	19	19	77	96	99	41	29
21	11	19	20	19	19	19	19	77	95	101	41	29
22	11	19	20	19	19	19	19	84	94	102	41	29
23	11	19	20	19	19	19	18	90	95	103	41	29
24	11	19	20	19	19	19	18	91	95	103	41	29
25	11	19	20	19	19	19	18	91	94	103	41	29
26	11	19	20	19	19	19	19	90	93	103	41	29
27	11	19	20	19	19	19	20	90	93	94	41	29
28	16	19	20	19	19	20	20	91	91	89	41	29
29	19	19	20	19	---	20	20	91	88	90	39	29
30	19	19	20	19	---	20	20	91	87	90	38	29
31	19	---	20	19	---	20	---	91	---	90	37	---
TOTAL	366	557	602	602	532	593	576	2469	2787	2968	1310	859
MEAN	11.8	18.6	19.4	19.4	19.0	19.1	19.2	79.6	92.9	95.7	42.3	28.6
MAX	19	19	20	20	19	20	21	91	96	103	67	38
MIN	10	18	19	19	19	19	18	50	87	87	37	23
AC-FT	726	1100	1190	1190	1060	1180	1140	4900	5530	5890	2600	1700

CAL YR 1977 TOTAL 12070 MEAN 33.1 MAX 83 MIN 10 AC-FT 23940
WTR YR 1978 TOTAL 14221 MEAN 39.0 MAX 103 MIN 10 AC-FT 28210

09019500 COLORADO RIVER NEAR GRANBY, CO

LOCATION.--Lat 40°07'15", long 105°54'00", in SW¼NW¼ sec.22, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi (0.5 km) upstream from bridge on U.S. Highway 34, 1.3 mi (2.1 km) upstream from Willow Creek, and 3.2 mi (5.1 km) northeast of Granby.

DRAINAGE AREA.--323 mi^2 (837 km^2).

PERIOD OF RECORD.--October 1907 to September 1911 (published as Grand River near Granby), October 1933 to September 1953. May 1961 to current year (irrigation season only). Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,960 ft (2,426 m), from topographic map. June 10, 1908, to Sept. 30, 1911, and May 12 to June 10, 1934, nonrecording gage, at site 300 ft (91 m) upstream at different datums. June 11, 1934, to Sept. 30, 1953, water-stage recorder at present site and datum.

REMARKS.--Records good. Flow regulated by Lake Granby (station 09018500) since Sept. 13, 1949. Several diversions for irrigation of hay meadows above station. Transmountain diversions above station by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF SEASONAL RECORD.--Maximum discharge, 1,460 ft^3/s (41.3 m^3/s) July 1, 1973, gage height, 4.25 ft (1.295 m); minimum daily, 9.7 ft^3/s (0.27 m^3/s) Sept. 22, 1975.

EXTREMES FOR PERIOD OF CONTINUOUS RECORD.--Maximum discharge observed, 4,100 ft^3/s (116 m^3/s) June 20, 1909, gage height, 5.5 ft (1.68 m), site and datum then in use; minimum daily, 6.6 ft^3/s (0.19 m^3/s) Jan. 29, 1950; minimum observed prior to starting construction of Shadow Mountain Lake, 20 ft^3/s (0.57 m^3/s) Apr. 6, 1936 (discharge measurement).

EXTREMES FOR CURRENT SEASON.--Maximum discharge, 99 ft^3/s (2.80 m^3/s) at 1800 May 18, gage height, 1.14 ft (0.347 m); minimum daily, 16 ft^3/s (0.45 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	49	76	72	67	28
2							---	75	79	71	41	22
3							---	79	82	72	41	27
4							---	79	76	71	41	30
5							---	81	75	72	41	25
6							---	81	74	74	42	21
7							---	81	78	74	40	23
8							---	79	78	74	40	24
9							---	78	75	72	40	23
10							---	78	75	75	41	24
11							---	79	75	75	40	24
12							---	79	75	71	42	17
13							---	79	78	72	42	16
14							---	81	79	74	41	18
15							---	81	78	72	38	18
16							---	81	78	71	39	18
17							---	82	81	72	40	19
18							---	86	79	71	41	20
19							---	83	79	71	39	22
20							---	81	82	71	39	22
21							---	82	81	71	39	20
22							---	81	79	72	40	22
23							---	79	78	72	40	23
24							---	78	78	74	40	24
25							---	79	78	76	40	18
26							---	81	79	74	40	18
27							27	79	79	75	40	18
28							25	81	79	72	40	18
29							25	76	79	74	40	19
30							30	75	81	74	40	20
31							---	78	---	81	40	---
TOTAL							---	2441	2343	2262	1274	641
MEAN							---	78.7	76.1	73.0	41.1	21.4
MAX							---	86	82	81	67	30
MIN							---	49	74	71	38	16
AC-FT							---	4840	4650	4490	2530	1270

09020700 WILLOW CREEK RESERVOIR NEAR GRANBY, CO

LOCATION.--Lat 40°08'49", long 105°56'31", in SE¼ sec.7, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, in shaft house near right end of Willow Creek Dam, 3.2 mi (5.1 km) upstream from mouth, and 4.2 mi (6.8 km) north of Granby.

DRAINAGE AREA.--134 mi² (347 km²).

PERIOD OF RECORD.--May 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by earth and rockfill dam; storage began March 1953. Dead storage pool filled May 3, 1953. Usable capacity, 9,060 acre-ft (11.2 hm³) between elevations 8,077.00 ft (2,461.870 m), trash rack sill at outlet, and 8,130.00 ft (2,478.024 m), crest of spillway. Dead storage, 1,490 acre-ft (1.84 hm³). Figures given represent usable contents. Water is pumped to Lake Granby for transmountain diversion for irrigation and power in South Platte River basin. Records are furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,060 acre-ft (11.2 hm³) Aug. 3, 1953, elevation, 8,129.99 ft (2,478.021 m); minimum since first filling to spillway, 1,470 acre-ft (1.81 hm³) Apr. 24, 1974, elevation, 8,090.14 ft (2,465.875 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,980 acre-ft (11.1 hm³) Apr. 23, elevation, 8,129.70 ft (2,477.933 m); minimum, 5,690 acre-ft (7.02 hm³) Nov. 23, elevation, 8,116.70 ft (2,473.998 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	8,122.57	7,020	-
Oct. 31	8,125.38	7,750	+730
Nov. 30	8,117.39	5,820	-1,930
Dec. 31	8,119.30	6,240	+420
CAL YR 1977			+450
Jan. 31	8,120.90	6,620	+380
Feb. 28	8,122.08	6,900	+280
Mar. 31	8,119.56	6,300	-600
Apr. 30	8,122.26	6,950	+650
May 31	8,129.27	8,850	+1,900
June 30	8,124.45	7,500	-1,350
July 31	8,120.36	6,490	-1,010
Aug. 31	8,121.45	6,750	+260
Sept. 30	8,125.21	7,700	+950
WTR YR 1978			+680

09021000 WILLOW CREEK BELOW WILLOW CREEK RESERVOIR, CO

LOCATION.--Lat 40°08'45", long 105°56'22", in SE¼ sec.7, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 1,000 ft (300 m) downstream from Willow Creek Dam, 0.8 mi (1.3 km) upstream from Bunte Highline Canal diversion, 4.0 mi (6.4 km) upstream from mouth, and 4.0 mi (6.4 km) north of Granby.

DRAINAGE AREA.--134 mi^2 (347 km^2).

PERIOD OF RECORD.--August 1953 to current year.

REVISED RECORDS.--WSP 1563: 1954-55.

GAGE.--Water-stage recorder and 10-ft (3-m) Parshall flume with overflow weirs. Datum of gage is 8,023.64 ft (2,445.605 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Supplementary water-stage recorder and Parshall flume on McQueary ditch 500 ft (150 m) downstream from point of diversion at Willow Creek Dam. Datum of gage is 8,031.68 ft (2,448.056 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except those for winter period, which are poor. Records show combined flow of creek and McQueary ditch. Flow completely regulated by Willow Creek Reservoir (station 09020700). Diversions above station for irrigation of hay meadows. McQueary ditch diverts at Willow Creek Dam for irrigation below station. Diversion above station from Willow Creek Reservoir by Willow Creek Pump Canal to Lake Granby as part of the Colorado-Big Thompson project (see table below for figures of diversion). Prior to Oct. 1, 1962, records include priming and waste water from pump canal. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, by Willow Creek Pump Canal; furnished by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE (COMBINED FLOW).--25 years, 29.0 ft^3/s (0.821 m^3/s), 21,010 acre-ft/yr (25.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft^3/s (24.6 m^3/s) June 7, 1957, gage height, 4.84 ft (1.475 m); no flow Sept. 17-24, 1963, May 1, 1965, May 2-10, Aug. 16-21, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 535 ft^3/s (15.2 m^3/s) at 1500 May 25 to 1000 May 26, gage height, 4.42 ft (1.347 m); minimum daily, 0.14 ft^3/s (0.004 m^3/s) Aug. 18-20, Aug. 27 to Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	7.2	6.6	7.0	6.8	7.0	7.4	3.8	290	53	45	.14
2	7.0	7.2	6.6	7.0	6.8	7.0	7.4	.69	231	53	44	.14
3	7.0	7.2	6.6	7.0	6.8	7.0	7.4	.69	182	54	44	.14
4	7.0	7.2	6.6	7.0	6.8	7.0	7.4	.69	154	54	25	.14
5	7.0	7.2	6.6	7.0	6.8	7.0	7.4	.69	142	54	.44	.14
6	7.0	7.2	6.6	7.2	6.8	7.0	7.4	.69	146	53	.33	.14
7	7.0	7.2	6.6	7.2	6.8	7.0	7.4	.69	146	53	.44	.14
8	7.0	7.2	6.6	7.2	6.8	7.0	7.9	.69	177	53	.44	.14
9	7.0	7.2	6.6	7.2	6.8	7.0	7.9	.56	192	54	.44	.14
10	7.5	7.2	6.6	7.2	6.8	7.0	7.9	.56	243	54	.33	.14
11	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	360	54	.33	.14
12	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	421	54	.33	.23
13	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	368	54	.33	.23
14	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	345	54	.33	.23
15	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	335	54	.33	.23
16	7.5	6.8	6.6	7.2	6.8	7.0	7.9	.56	268	54	.33	.23
17	7.5	6.8	6.6	7.2	6.8	7.0	20	11	238	54	.23	.23
18	7.5	6.8	6.6	7.2	6.8	7.0	63	14	180	54	.14	.23
19	7.5	6.8	6.6	7.2	6.8	7.0	57	43	101	54	.14	.23
20	7.5	6.8	6.6	7.2	6.8	7.0	25	62	63	54	.14	.23
21	7.5	6.8	6.6	7.0	6.8	7.0	51	62	55	54	.23	.23
22	7.5	6.8	6.6	7.0	6.8	7.0	63	78	55	54	.23	.23
23	7.5	6.8	6.6	7.0	6.8	7.0	63	164	55	52	.23	.23
24	7.5	6.8	6.6	7.0	6.8	7.0	30	340	55	47	.23	.23
25	7.5	6.8	6.6	7.0	6.8	7.0	7.7	486	55	45	.23	.33
26	7.2	6.8	6.8	7.0	6.8	7.0	7.7	493	54	45	.23	.44
27	7.2	6.8	6.8	7.0	6.8	7.0	7.7	393	54	45	.14	.33
28	7.2	6.8	6.8	7.0	6.8	7.0	7.7	285	53	45	.14	.33
29	7.2	6.8	6.8	7.0	---	7.0	7.7	204	53	45	.14	.33
30	7.2	6.8	6.8	7.0	---	7.0	7.7	200	53	45	.14	.33
31	7.2	---	6.8	7.0	---	7.0	---	209	---	45	.14	---
TOTAL	226.2	208.0	205.8	220.0	190.4	217.0	541.1	3057.11	5124	1597	165.13	6.72
MEAN	7.30	6.93	6.64	7.10	6.80	7.00	18.0	98.6	171	51.5	5.33	.22
MAX	7.5	7.2	6.8	7.2	6.8	7.0	63	493	421	54	45	.44
MIN	7.0	6.8	6.6	7.0	6.8	7.0	7.4	.56	53	45	.14	.14
AC-FT	449	413	408	436	378	430	1070	6060	10160	3170	328	13
a	0	2320	0	0	0	1150	3570	18050	23480	5150	1280	0

CAL YR 1977 TOTAL 4894.37 MEAN 13.4 MAX 50 MIN .33 AC-FT 9710
WTR YR 1978 TOTAL 11758.46 MEAN 32.2 MAX 493 MIN .14 AC-FT 23320

a Diversions, in acre-feet, by Willow Creek Pump Canal, furnished by U.S. Bureau of Reclamation.
NOTE.--NO GAGE-HEIGHT RECORD OCT. 3 TO APR. 18.

09024000 FRASER RIVER NEAR WINTER PARK, CO

LOCATION.--Lat 39°54'00", long 105°46'34", in SE¼ sec.4, T.2 S., R.75 W., Grand County, Hydrologic unit 14010001, on left bank 500 ft (152 m) downstream from bridge on U.S. Highway 40, 1.1 mi (1.8 km) northwest of Winter Park, 2.0 mi (3.2 km) upstream from Vasquez Creek, 3.5 mi (5.6 km) downstream from point of diversion for Moffat water tunnel, and 3.9 mi (6.3 km) southeast of Fraser.

DRAINAGE AREA.--27.6 mi² (71.5 km²).

PERIOD OF RECORD.--September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Arrow" 1910-23 and as "near West Portal" 1924-39. Records since June 9, 1936, equivalent to earlier records if transmountain diversions are added to flow past station.

REVISED RECORDS.--WSP 929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,906.23 ft (2,714.619 m) Colorado State Highway datum (levels by U.S. Geological Survey). Sept. 23, 1910, to May 12, 1916, nonrecording gage at trail bridge 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station through Berthoud Pass ditch (see elsewhere in this report) and to Moffat water tunnel (not known since 1958). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s (23.2 m³/s) June 13, 1918, gage height, 2.9 ft (0.88 m); minimum daily determined, 2 ft³/s (0.06 m³/s) Mar. 30, Apr. 9, 1912, Jan 23, 1915.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 136 ft³/s (3.85 m³/s) at 1800 June 15, gage height, 1.64 ft (0.500 m); maximum gage height, 2.03 ft (0.619 m) Mar. 12 (backwater from ice); minimum daily discharge, 3.9 ft³/s (0.11 m³/s) Oct. 1, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.5	5.0	5.6	6.4	7.0	10	11	26	77	8.9	8.7
2	4.0	4.5	5.0	5.6	6.4	7.0	8.9	11	26	74	8.5	9.7
3	4.1	4.5	5.2	5.6	6.4	7.0	8.0	11	26	38	8.3	10
4	4.1	4.5	5.2	5.6	6.4	7.0	9.3	11	25	17	9.9	8.6
5	4.8	5.0	5.2	5.5	6.4	7.0	8.9	10	26	15	9.3	8.2
6	4.4	5.0	5.2	5.4	6.9	7.0	9.7	10	28	15	9.4	9.1
7	6.0	5.0	5.2	5.5	6.7	7.0	12	9.5	27	17	9.5	10
8	4.3	5.0	5.2	5.7	6.5	7.0	13	8.9	27	14	9.5	10
9	4.1	4.5	5.2	5.5	6.5	6.0	12	11	27	36	12	10
10	4.2	4.5	5.2	5.5	6.4	6.0	11	11	28	41	9.7	10
11	4.8	4.5	5.2	5.3	6.2	6.0	12	12	29	58	9.1	11
12	4.6	5.0	5.2	5.2	6.2	6.0	11	13	31	44	9.7	11
13	4.2	5.0	5.4	5.1	6.0	6.0	11	15	40	40	9.4	11
14	3.9	5.0	5.2	5.0	5.6	6.0	10	19	45	55	9.8	10
15	4.2	4.9	5.2	5.0	5.7	6.0	11	22	47	37	9.6	10
16	4.4	4.7	5.2	5.0	6.2	6.0	13	25	59	9.5	8.9	7.2
17	4.4	4.8	5.2	5.2	6.4	6.0	12	21	38	8.3	8.5	6.4
18	4.5	4.9	5.2	5.3	7.0	6.0	11	17	29	8.6	9.6	5.8
19	4.7	4.9	5.2	5.4	7.0	5.5	11	18	29	12	9.8	5.5
20	4.8	4.8	5.2	5.4	7.0	5.5	11	16	28	12	12	5.5
21	4.9	4.8	5.4	5.5	7.0	5.5	11	21	33	11	11	5.3
22	4.9	4.8	5.4	5.5	7.0	5.5	10	25	37	9.5	9.9	5.2
23	4.9	5.0	5.4	5.6	7.0	5.5	8.9	26	31	9.1	9.8	5.1
24	4.9	4.8	5.5	5.6	7.0	5.5	11	27	37	8.8	10	5.3
25	4.7	4.9	5.5	6.0	7.0	5.5	13	27	45	7.6	9.0	26
26	4.6	4.9	5.5	6.0	7.0	5.5	16	28	24	7.6	9.1	20
27	4.5	4.8	5.6	6.0	7.0	6.4	14	27	29	9.2	9.1	14
28	4.5	4.9	5.6	6.0	7.0	7.1	11	28	46	16	9.1	12
29	4.5	4.9	5.5	6.0	---	8.0	11	27	63	12	9.4	9.0
30	4.6	5.0	5.5	6.0	---	8.9	12	28	74	10	8.8	6.3
31	4.7	---	5.8	6.0	---	10	---	27	---	9.1	9.9	---
TOTAL	140.1	144.3	164.5	171.6	184.3	200.4	333.7	575.4	1060	738.3	296.5	285.9
MEAN	4.52	4.81	5.31	5.54	6.58	6.46	11.1	18.6	35.3	23.8	9.56	9.53
MAX	6.0	5.0	5.8	6.0	7.0	10	16	28	74	77	12	26
MIN	3.9	4.5	5.0	5.0	5.6	5.5	8.0	8.9	24	7.6	8.3	5.1
AC-FT	278	286	326	340	366	397	662	1140	2100	1460	588	567

CAL YR 1977 TOTAL 2531.0 MEAN 6.93 MAX 18 MIN 3.5 AC-FT 5020
WTR YR 1978 TOTAL 4295.0 MEAN 11.8 MAX 77 MIN 3.9 AC-FT 8520

09025000 VASQUEZ CREEK NEAR WINTER PARK, CO

LOCATION.--Lat 39°55'13", long 105°47'05", in NE¼NW¼ sec.33, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 40 ft (12 m) downstream from bridge on U.S. Highway 40, 0.2 mi (0.3 km) upstream from mouth, 2.5 mi (4.0 km) northwest of Winter Park, 2.5 mi (4.0 km) southeast of Fraser, and 4.5 mi (7.2 km) downstream from Moffat water tunnel diversion.

DRAINAGE AREA.--27.8 mi² (72.0 km²).

PERIOD OF RECORD.--June to August 1907, July to November 1909, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for June to October 1908, published in WSP 259, are unreliable and should not be used. Published as Vasquez River at lower station, near Fraser 1907-9, and as "near West Portal" 1934-39. Records for May 26, 1937, to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8,768.48 ft (2,672.633 m) National Geodetic Vertical Datum of 1929. June 1, 1907, to Oct. 31, 1909, nonrecording gage at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station to Moffat water tunnel not known since 1959. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft³/s (13.3 m³/s) June 10, 1952, gage height, 3.13 ft (0.954 m), from rating curve extended above 340 ft³/s (9.6 m³/s); no flow at times in 1944, 1946, 1956, 1960, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 100 ft³/s (2.83 m³/s) at 0700 June 11, gage height, 2.43 ft (0.741 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.4	3.3	2.4	2.2	2.2	4.5	7.7	16	40	6.6	11
2	3.6	3.5	3.3	2.4	2.2	2.2	4.7	7.7	14	29	6.6	11
3	3.6	3.5	3.3	2.4	2.2	2.2	4.0	8.9	14	20	8.3	11
4	3.6	3.8	3.2	2.4	2.2	2.2	4.2	8.9	13	10	8.6	11
5	4.1	3.7	3.3	2.4	2.2	2.2	4.3	7.9	13	9.7	8.6	11
6	4.5	3.6	3.3	2.4	2.2	2.2	4.0	8.2	13	8.9	8.4	11
7	5.0	3.4	3.3	2.4	2.2	2.2	3.8	7.2	12	8.4	8.9	11
8	4.1	3.1	3.3	2.4	2.2	2.2	4.3	7.7	11	7.3	8.7	11
9	3.8	3.1	3.3	2.4	2.2	2.2	3.4	12	11	7.6	9.2	11
10	4.1	3.0	3.0	2.4	2.2	2.2	3.8	8.5	38	7.7	11	11
11	5.0	3.0	3.0	2.4	2.2	2.2	4.0	10	60	7.6	10	11
12	4.5	3.2	3.0	2.4	2.0	2.2	4.0	11	13	7.5	9.7	11
13	4.2	3.6	3.0	2.4	2.0	2.2	4.4	12	9.8	11	8.4	11
14	4.1	3.7	3.0	2.4	2.0	2.2	4.4	15	27	21	11	11
15	3.7	4.0	3.0	2.4	2.0	2.2	4.2	21	8.2	17	8.9	11
16	3.6	3.9	3.0	2.4	2.0	2.2	5.0	25	7.5	7.4	8.6	11
17	3.6	3.7	3.0	2.4	2.0	2.2	4.5	23	5.7	6.2	8.9	11
18	3.5	3.5	3.1	2.4	1.8	2.5	4.5	20	6.4	5.8	9.9	11
19	3.3	3.5	3.0	2.4	2.0	2.8	4.5	19	6.6	6.4	9.7	11
20	3.5	3.5	2.8	2.4	2.0	3.0	4.9	20	7.3	7.6	9.8	11
21	3.6	3.5	2.6	2.4	2.0	2.6	4.9	21	7.1	6.8	9.7	11
22	3.8	3.5	2.7	2.4	2.0	3.0	5.9	23	7.6	6.7	9.8	11
23	3.6	3.5	2.8	2.2	2.0	3.0	5.9	24	8.6	6.7	11	11
24	3.5	3.5	2.8	2.2	2.0	2.8	6.0	25	8.8	6.7	11	11
25	3.7	3.5	2.8	2.2	2.2	3.0	6.9	22	7.3	6.7	11	11
26	3.5	3.4	2.6	2.2	2.2	2.8	5.8	19	10	7.2	9.1	11
27	3.6	3.4	2.5	2.2	2.2	3.6	7.2	17	10	7.0	9.0	11
28	3.4	3.4	2.6	2.2	2.2	3.5	8.0	17	10	7.1	9.0	11
29	3.2	3.0	2.6	2.2	---	3.6	7.8	17	22	7.8	9.1	11
30	3.4	3.1	2.4	2.2	---	4.2	8.4	17	50	7.5	10	11
31	3.2	---	2.4	2.2	---	4.4	---	17	---	7.1	11	---
TOTAL	117.7	103.5	91.3	72.6	58.8	82.2	152.2	479.7	447.9	323.4	289.5	330
MEAN	3.80	3.45	2.95	2.34	2.10	2.65	5.07	15.5	14.9	10.4	9.34	11.0
MAX	5.0	4.0	3.3	2.4	2.2	4.4	8.4	25	60	40	11	11
MIN	3.2	3.0	2.4	2.2	1.8	2.2	3.4	7.2	5.7	5.8	6.6	11
AC-FT	233	205	181	144	117	163	302	951	888	641	574	655

CAL YR 1977 TOTAL 1638.8 MEAN 4.49 MAX 15 MIN 1.5 AC-FT 3250
WTR YR 1978 TOTAL 2548.8 MEAN 6.98 MAX 60 MIN 1.8 AC-FT 5060

09025400 ELK CREEK NEAR FRASER, CO

LOCATION.--Lat 39°55'09", long 105°49'31", in SE¼NW¼ sec.31, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 100 ft (30 m) upstream from unnamed tributary 1,150 ft (350 m) downstream from West Elk Creek, 2.0 mi (3.2 km) southwest of Fraser, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--7.15 mi² (18.52 km²).

PERIOD OF RECORD.--September 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,805 ft (2,684 m), from topographic map.

REMARKS.--Records good except those for November and April, which are poor. Transmountain diversions above station to Moffat water tunnel. Diversions for irrigation of about 100 acres (405,000 m²) of hay meadows above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88 ft³/s (2.49 m³/s) May 8, 1974, gage height, 2.67 ft (0.814 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Jan. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23 ft³/s (0.65 m³/s) at 1800 May 16, gage height, 2.06 ft (0.628 m); minimum daily, 0.27 ft³/s (0.008 m³/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	.32	.40	.44	.41	.67	3.0	8.0	10	1.5	.36
2	1.0	1.0	.33	.40	.44	.43	.73	3.6	7.3	10	1.5	.35
3	.98	1.0	.35	.40	.44	.40	.70	4.4	6.8	9.6	1.3	.36
4	1.0	1.0	.35	.40	.44	.37	.70	4.1	6.5	9.3	1.1	.37
5	1.4	1.1	.35	.40	.44	.38	.75	3.1	6.5	9.0	1.0	.35
6	2.2	.93	.35	.40	.44	.37	.85	2.8	6.3	8.7	1.0	.31
7	3.4	.60	.35	.40	.44	.35	.89	3.0	5.5	8.2	.99	.30
8	2.1	.66	.35	.40	.44	.36	1.1	2.4	5.2	7.6	.58	.30
9	1.7	.50	.35	.40	.44	.37	1.2	4.1	4.6	7.2	.44	.30
10	1.5	.50	.35	.40	.44	.37	1.1	4.6	4.1	6.9	.40	.30
11	1.5	.49	.35	.40	.43	.36	.86	5.5	3.6	6.4	.39	.31
12	1.2	.45	.35	.40	.40	.36	1.4	6.7	2.6	5.9	.37	.36
13	1.2	.40	.35	.43	.39	.36	1.2	8.2	2.3	5.4	.52	.33
14	1.2	.40	.35	.41	.37	.35	1.1	11	2.1	5.0	.98	.31
15	1.1	.36	.34	.44	.40	.35	1.0	14	1.8	4.7	1.2	.30
16	1.1	.32	.32	.43	.40	.32	1.1	16	1.2	4.6	.88	.27
17	1.1	.32	.32	.40	.40	.34	1.1	13	1.2	4.4	.55	.27
18	1.1	.31	.32	.40	.40	.36	1.2	12	.88	4.1	.52	.30
19	1.1	.30	.32	.40	.40	.36	1.3	12	2.3	3.7	.63	.29
20	1.1	.30	.32	.40	.40	.36	1.3	12	10	4.2	.51	.31
21	1.2	.35	.32	.40	.40	.37	1.4	13	11	3.9	.55	.33
22	1.2	.35	.32	.40	.40	.39	1.5	14	12	3.2	.49	.39
23	1.1	.35	.32	.40	.40	.37	1.5	14	12	2.2	.47	.42
24	1.1	.35	.35	.40	.40	.35	2.2	14	12	1.9	.44	.40
25	1.0	.35	.35	.40	.40	.34	3.0	13	12	1.8	.40	.42
26	1.0	.35	.35	.40	.40	.36	3.8	12	11	1.5	.42	.41
27	.99	.35	.35	.40	.37	.41	3.7	12	11	1.4	.38	.40
28	.99	.35	.35	.40	.38	.41	2.8	12	11	1.3	.37	.44
29	1.0	.32	.35	.40	---	.44	3.0	10	11	1.9	.37	.42
30	1.1	.32	.36	.40	---	.48	3.4	9.3	11	2.1	.36	.40
31	1.0	---	.38	.44	---	.59	---	8.9	---	1.6	.35	---
TOTAL	39.86	15.38	10.59	12.55	11.54	11.84	46.55	277.7	202.78	157.7	21.36	10.38
MEAN	1.29	.51	.34	.40	.41	.38	1.55	8.96	6.76	5.09	.69	.35
MAX	3.4	1.1	.38	.44	.44	.59	3.8	16	12	10	1.5	.44
MIN	.98	.30	.32	.40	.37	.32	.67	2.4	.88	1.3	.35	.27
AC-FT	79	31	21	25	23	23	92	551	402	313	42	21

CAL YR 1977 TOTAL 325.14 MEAN .89 MAX 5.2 MIN .10 AC-FT 645
WTR YR 1978 TOTAL 818.23 MEAN 2.24 MAX 16 MIN .27 AC-FT 1620

09026500 ST. LOUIS CREEK NEAR FRASER, CO

LOCATION.--Lat 39°54'36", long 105°52'40", in SE¼SW¼ sec.34, T.1 S., R.76 W., Grand County, Hydrologic unit 14010001, on left bank 300 ft (91 m) downstream from West St. Louis Creek and 4.1 mi (6.6 km) southwest of Fraser.

DRAINAGE AREA.--32.9 mi² (85.2 km²).

PERIOD OF RECORD.--October 1933 to current year. Prior to August 1934, monthly discharge only, published in WSP 1313. Records for May 1956 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,980.17 ft (2,737.156 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station to Moffat water tunnel not known since 1959. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft³/s (13.3 m³/s) June 15, 1952, gage height, 2.69 ft (0.881 m); maximum gage height, 3.21 ft (0.978 m) June 10, 1952 (backwater from log on control); minimum discharge not determined, probably occurred during January or February 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 199 ft³/s (5.64 m³/s) at 1900 June 16, gage height, 2.08 ft (0.634 m); minimum daily, 4.3 ft³/s (0.12 m³/s) Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.1	5.0	5.3	5.1	4.9	7.2	8.7	50	147	34	13
2	5.1	5.2	5.2	5.3	5.0	4.7	7.1	8.9	52	140	34	12
3	4.9	5.2	5.1	5.3	5.0	4.7	6.2	9.6	54	95	31	12
4	4.7	5.0	5.0	5.3	4.9	4.6	6.0	9.5	56	50	26	12
5	6.9	4.7	5.2	5.3	4.9	4.7	5.8	9.0	55	45	23	12
6	8.1	4.5	5.6	5.3	4.9	4.7	6.2	9.0	53	52	22	12
7	9.8	4.9	5.2	5.3	4.9	4.7	6.6	9.7	55	87	22	11
8	7.5	5.1	5.3	5.3	4.7	4.8	7.2	9.2	56	74	19	11
9	6.8	5.4	5.4	5.3	4.8	4.8	7.4	9.6	57	52	17	11
10	7.0	5.7	5.2	5.3	4.7	4.9	6.1	9.8	68	49	17	11
11	6.2	6.0	5.2	5.1	4.8	4.9	6.6	11	63	47	15	12
12	5.8	5.2	5.1	5.1	4.8	5.0	7.3	12	63	63	16	12
13	5.9	4.6	5.1	5.3	5.0	5.0	6.3	13	60	94	16	11
14	5.6	4.3	4.9	5.3	5.0	5.0	6.6	16	78	95	17	11
15	6.0	4.5	4.9	5.4	4.7	5.0	6.9	20	130	73	17	10
16	6.0	4.5	4.9	5.3	4.8	4.9	7.2	24	152	39	16	9.8
17	6.0	4.7	5.1	5.3	4.8	4.9	7.4	24	129	40	14	10
18	6.0	4.8	5.2	5.3	4.8	4.9	7.7	24	94	38	14	10
19	6.0	4.9	5.1	5.3	4.8	4.9	7.7	24	68	36	16	10
20	6.0	5.0	5.1	5.3	4.8	4.9	7.6	26	47	36	16	11
21	6.1	5.0	5.2	5.3	4.8	5.0	7.7	28	50	40	15	10
22	6.1	5.1	5.2	5.3	4.9	5.0	7.7	31	59	43	16	10
23	5.2	4.9	5.2	5.2	4.9	5.0	7.0	32	99	41	15	9.9
24	5.0	4.9	5.2	5.0	4.9	5.0	7.7	34	128	39	15	9.7
25	5.1	4.9	5.2	5.1	4.9	5.1	8.6	39	115	37	15	14
26	5.0	4.9	5.2	5.1	4.8	5.3	9.9	46	104	36	14	14
27	5.0	4.9	5.2	5.1	4.7	5.5	9.9	46	133	36	14	9.9
28	4.9	4.9	5.3	5.3	4.9	5.7	9.3	47	157	36	13	9.1
29	4.9	4.8	5.3	5.1	---	6.0	9.1	46	163	40	13	8.7
30	5.2	5.1	5.3	4.9	---	6.4	9.1	49	169	40	13	8.5
31	5.1	---	5.3	4.9	---	7.0	---	51	---	35	13	---
TOTAL	183.0	148.7	160.4	162.0	136.0	157.9	223.1	736.0	2617	1775	558	327.6
MEAN	5.90	4.96	5.17	5.23	4.86	5.09	7.44	23.7	87.2	57.3	18.0	10.9
MAX	9.8	6.0	5.6	5.4	5.1	7.0	9.9	51	169	147	34	14
MIN	4.7	4.3	4.9	4.9	4.7	4.6	5.8	8.7	47	35	13	8.5
AC-FT	363	295	318	321	270	313	443	1460	5190	3520	1110	650

CAL YR 1977 TOTAL 4535.1 MEAN 12.4 MAX 50 MIN 4.3 AC-FT 9000
WTR YR 1978 TOTAL 7184.7 MEAN 19.7 MAX 169 MIN 4.3 AC-FT 14250

09032000 RANCH CREEK NEAR FRASER, CO

LOCATION.--Lat 39°57'00", long 105°45'54", in NW¼NE¼ sec.22, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 450 ft (137 m) downstream from Middle Fork and 2.7 mi (4.3 km) east of Fraser.

DRAINAGE AREA.--19.9 mi² (51.5 km²).

PERIOD OF RECORD.--August 1934 to current year. Records since May 15, 1949, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--WSP 1243: 1935.

GAGE.--Water-stage recorder. Altitude of gage is 8,685 ft (2,647 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Diversion above station for irrigation of hay meadows along Fraser River. Transmountain diversion above station to Moffat water tunnel (not furnished by Colorado Division of Water Resources). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 402 ft³/s (11.2 m³/s) June 28, 1957, gage height, 3.72 ft (1.134 m); minimum daily, 0.4 ft³/s (0.011 m³/s) Sept. 21, Oct. 6, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 174 ft³/s (4.93 m³/s) at 2300 June 14, gage height, 2.77 ft (0.844 m); minimum daily, 1.3 ft³/s (0.037 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.2	2.8	2.5	2.5	2.1	4.0	6.7	23	29	6.4	2.9
2	3.4	3.2	2.8	2.5	2.4	2.1	3.6	6.6	23	41	6.1	2.8
3	3.5	3.2	2.8	2.4	2.4	2.2	3.2	7.2	22	23	5.8	2.7
4	3.4	3.2	2.8	2.4	2.4	2.2	3.3	6.8	21	4.3	5.6	2.7
5	4.0	3.2	2.9	2.4	2.4	2.2	3.4	6.1	20	12	5.3	2.6
6	5.4	3.2	2.9	2.3	2.4	2.2	4.2	5.9	20	15	5.2	2.3
7	6.7	3.3	2.8	2.2	2.3	2.2	4.2	5.7	20	40	5.1	1.9
8	5.0	3.4	3.0	2.2	2.2	2.2	4.9	5.4	20	43	4.9	1.5
9	4.6	3.5	3.5	2.2	2.2	2.2	4.6	6.6	22	26	4.8	1.6
10	4.4	3.8	2.7	2.2	2.2	2.1	3.7	8.0	34	24	4.5	1.9
11	4.0	3.8	2.7	2.2	2.2	2.1	3.9	8.4	32	23	4.8	1.9
12	4.0	3.7	2.7	2.2	2.2	2.1	4.5	7.7	30	26	4.8	1.7
13	4.0	3.6	2.7	2.4	2.2	2.1	4.2	10	50	35	4.8	2.3
14	4.0	3.2	2.7	2.5	2.2	2.1	4.4	15	110	41	5.2	2.3
15	4.0	2.9	2.7	2.4	2.2	2.1	4.6	20	130	32	5.4	2.3
16	4.0	2.8	2.6	2.3	2.2	2.1	4.4	24	74	10	4.5	1.5
17	3.9	2.7	2.5	2.3	2.5	2.3	4.4	26	36	8.6	4.0	1.6
18	3.9	2.7	2.5	2.2	2.5	2.3	4.4	23	24	8.2	4.1	1.9
19	3.9	2.7	2.6	2.3	2.5	2.3	4.4	21	22	7.5	4.0	3.5
20	3.9	2.7	2.5	2.2	2.5	2.3	4.5	22	21	7.6	3.8	3.1
21	4.1	2.8	2.6	2.2	2.5	2.3	4.8	24	22	6.9	3.9	2.3
22	4.0	2.8	2.7	2.2	2.5	2.4	4.9	27	21	6.1	3.9	1.9
23	3.7	2.7	2.7	2.2	2.5	2.3	4.9	29	19	6.0	3.6	1.7
24	3.6	2.7	2.7	2.2	2.5	2.2	5.2	33	19	5.6	3.5	1.5
25	3.5	2.7	2.7	2.2	2.3	2.2	5.8	31	19	6.7	3.1	2.5
26	3.5	2.7	2.7	2.2	2.2	2.3	6.9	29	16	9.2	2.9	2.3
27	3.4	2.7	2.7	2.2	2.2	2.3	7.5	27	28	7.0	2.8	1.8
28	3.3	2.7	2.6	2.3	2.2	2.5	6.4	25	43	6.7	2.8	1.5
29	3.3	2.5	2.5	2.4	---	2.8	6.6	25	37	6.9	3.3	1.4
30	3.6	2.5	2.5	2.2	---	3.2	6.6	25	30	6.5	3.1	1.3
31	4.3	---	2.5	2.2	---	3.8	---	40	---	6.1	3.1	---
TOTAL	123.7	90.8	84.1	70.8	65.5	71.8	142.4	557.1	1008	529.9	135.1	63.2
MEAN	3.99	3.03	2.71	2.28	2.34	2.32	4.75	18.0	33.6	17.1	4.36	2.11
MAX	6.7	3.8	3.5	2.5	2.5	3.8	7.5	40	130	43	6.4	3.5
MIN	3.3	2.5	2.5	2.2	2.2	2.1	3.2	5.4	16	4.3	2.8	1.3
AC-FT	245	180	167	140	130	142	282	1110	2000	1050	268	125

CAL YR 1977 TOTAL 1721.0 MEAN 4.72 MAX 20 MIN 1.7 AC-FT 3410
WTR YR 1978 TOTAL 2942.4 MEAN 8.06 MAX 130 MIN 1.3 AC-FT 5840

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO

LOCATION.--Lat 40°05'00", long 106°05'15", in NE¼NE¼ sec.2, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on left bank about 1,000 ft (300 m) north of U.S. Highway 40, 1 mi (1.6 km) northeast of Hot Sulphur Springs, and 4.5 mi (7.2 km) upstream from Beaver Creek.

DRAINAGE AREA.--825 mi^2 (2,137 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to 1907 and 1914-18, published as Grand River at Hot Sulphur Springs, and as Grand River at Sulphur Springs 1907-13.

REVISED RECORDS.--WSP 1313: 1905. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,670 ft (2,338 m), from railroad elevations. July 28, 1904, to Apr. 16, 1906, nonrecording gage on bridge 1.7 mi (2.7 km) downstream at different datum. Apr. 17, 1906, to Sept. 18, 1930, nonrecording gage at bridge 1.4 mi (2.3 km) downstream at datum 7,651.26 ft (2,332.104 m) National Geodetic Vertical Datum of 1929. Supplemental water-stage recorder (nonrecording gage prior to Jan. 1, 1963) at different datum at site 1.7 mi (2.7 km) downstream, used for winter records some years.

REMARKS.--Records good except those for winter period, which are fair. Flow affected by transmountain diversions, storage reservoirs, and diversions above station for irrigation of about 13,000 acres (52.6 km^2).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 10,300 ft^3/s (292 m^3/s) June 15, 1921, gage height, 8.7 ft (2.56 m), site and datum then in use; minimum daily, 33 ft^3/s (0.93 m^3/s) Sept. 27, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft^3/s (34.0 m^3/s) at 0400 May 26, gage height, 2.18 ft (0.664 m); minimum daily, 50 ft^3/s (1.42 m^3/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	69	63	70	66	67	252	314	842	710	217	92
2	54	65	71	69	66	67	237	294	727	660	180	78
3	52	72	87	69	67	66	240	322	676	616	173	83
4	50	68	84	73	67	65	229	346	659	420	173	83
5	55	70	65	71	67	67	253	335	662	371	153	80
6	76	69	69	71	67	70	233	297	674	356	144	72
7	91	69	81	70	67	73	260	293	651	373	140	73
8	85	70	74	69	67	68	321	291	677	420	138	76
9	68	66	69	69	66	68	335	259	666	382	133	75
10	63	66	81	69	66	70	224	282	785	386	129	79
11	58	66	72	69	67	71	223	305	1030	410	120	84
12	53	66	75	68	66	69	317	334	1040	403	122	85
13	55	66	78	67	65	71	281	325	969	405	126	77
14	56	66	80	65	65	70	269	403	968	460	131	78
15	56	68	78	66	65	65	280	504	1020	460	145	77
16	56	67	76	67	65	64	291	640	1020	380	131	74
17	57	73	70	66	65	69	314	703	942	348	119	74
18	58	69	73	68	65	70	248	652	837	333	113	79
19	58	72	71	66	66	75	255	613	726	306	116	79
20	62	74	67	67	67	82	231	581	627	297	115	83
21	70	76	66	68	68	85	268	601	566	301	114	79
22	69	80	68	68	68	90	284	706	564	288	114	77
23	66	82	78	66	69	87	249	790	571	280	114	79
24	63	88	76	67	69	87	232	987	614	276	111	78
25	62	93	76	66	70	86	254	1150	609	262	111	74
26	61	92	75	68	71	90	274	1130	579	252	110	90
27	61	81	74	68	69	99	315	1000	530	238	104	84
28	60	79	76	66	68	112	293	902	627	220	99	79
29	65	79	74	65	---	138	277	752	676	230	96	76
30	72	74	74	67	---	154	333	700	781	244	95	75
31	75	---	73	66	---	196	---	873	---	227	93	---
TOTAL	1943	2195	2294	2104	1874	2611	8072	17684	22315	11314	3979	2372
MEAN	62.7	73.2	74.0	67.9	66.9	84.2	269	570	744	365	128	79.1
MAX	91	93	87	73	71	196	335	1150	1040	710	217	92
MIN	50	65	63	65	65	64	223	259	530	220	93	72
AC-FT	3850	4350	4550	4170	3720	5180	16010	35080	44260	22440	7890	4700

CAL YR 1977 TOTAL 40504 MEAN 111 MAX 326 MIN 45 AC-FT 80340
WTR YR 1978 TOTAL 78757 MEAN 216 MAX 1150 MIN 50 AC-FT 156200

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1947 to current year.
WATER TEMPERATURE: April 1949 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 400 micromhos Feb. 5, 1974; minimum daily, 40 micromhos June 2, 1947.
WATER TEMPERATURES: Maximum, 28°C July 17, 1971; minimum, freezing point on many days during winter months each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 180 micromhos several days during March to May; minimum daily, 70 micromhos June 4.
WATER TEMPERATURES: Maximum daily, 22.0°C July 27; minimum daily, 0.0°C many days during October to March.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 17...	1050	59	140	8.2	5.5	10.5	62	0	19
NOV 23...	1145	83	130	7.6	.0	10.8	61	0	19
DEC 15...	1020	76	110	7.6	.0	9.6	65	12	21
JAN 30...	1515	E65	130	7.6	.0	8.6	60	2	19
FEB 15...	1545	66	130	7.5	.0	11.2	58	0	18
MAR 15...	1600	63	140	7.6	.0	9.8	61	0	19
APR 29...	1355	E130	140	8.2	11.0	9.2	64	8	20
MAY 24...	1330	906	110	7.4	11.0	7.9	39	0	12
JUN 15...	1300	1100	90	7.5	13.0	8.6	36	0	11
JUL 25...	0850	E275	140	7.8	12.0	8.0	61	0	19
AUG 21...	1150	121	130	8.2	19.0	7.8	51	0	16
SEP 21...	1030	75	150	8.4	7.0	9.7	57	0	18

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 17...	3.5	6.0	.3	1.4	80	0	66	8.0	1.6
NOV 23...	3.2	6.7	.4	1.3	78	0	64	7.8	1.3
DEC 15...	3.1	6.7	.4	1.6	65	0	53	9.8	2.2
JAN 30...	3.0	6.3	.4	1.2	71	0	58	7.0	1.5
FEB 15...	3.2	6.1	.3	1.1	72	0	59	5.9	1.6
MAR 15...	3.4	6.7	.4	1.0	75	0	62	7.3	1.9
APR 29...	3.4	7.1	.4	1.4	68	0	56	14	1.4
MAY 24...	2.2	5.5	.4	.9	47	0	39	6.0	1.3
JUN 15...	2.1	4.4	.3	1.0	49	0	40	7.0	1.0
JUL 25...	3.4	5.5	.3	1.0	75	0	62	4.6	.6
AUG 21...	2.7	5.4	.3	1.2	68	0	56	4.8	1.0
SEP 21...	3.0	6.5	.4	1.4	76	0	62	6.0	1.5

E ESTIMATED.

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT									
17...	.3	12	92	.13	14.7	.03	.00	140	10
NOV									
23...	.3	12	91	.12	20.5	.11	.02	60	20
DEC									
15...	.3	12	89	.12	18.3	.10	.03	60	0
JAN									
30...	.2	13	87	.12	15.3	.24	.02	80	20
FEB									
15...	.2	13	86	.12	15.4	.25	.03	70	20
MAR									
15...	.2	11	89	.12	15.1	.24	.02	80	20
APR									
29...	.3	12	94	.13	33.0	.12	.01	170	20
MAY									
24...	.1	12	63	.09	154	.00	.01	150	40
JUN									
15...	.2	11	62	.08	184	.01	.01	130	30
JUL									
25...	.2	12	84	.11	62.4	.02	.00	170	10
AUG									
21...	.2	11	76	.10	24.8	.03	.03	150	10
SEP									
21...	.2	12	86	.12	17.5	.01	.00	160	10

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120			---	140	140	160	160	80	100	120	100
2	120			---	160	140	180	160	---	110	130	120
3	90			---	150	85	180	160	90	120	150	130
4	120			---	140	140	180	160	70	120	140	130
5	140			---	140	140	180	160	80	120	140	120
6	140			---	140	140	170	160	120	130	120	100
7	---			---	160	160	170	180	120	130	120	130
8	150			---	140	100	160	180	100	130	140	110
9	150			---	150	140	160	180	120	120	140	100
10	150			---	140	150	160	180	---	130	140	120
11	---			---	90	100	160	160	80	130	120	120
12	160			---	140	140	160	160	100	110	140	110
13	155			---	140	110	160	160	100	140	140	140
14	150			130	130	140	160	140	100	120	130	140
15	140			110	140	160	120	140	100	100	---	140
16	120			140	110	140	140	110	90	140	120	130
17	95			100	140	150	140	110	100	140	120	130
18	120			140	140	110	160	120	100	130	120	120
19	120			90	140	140	180	140	110	140	100	140
20	120			130	140	110	160	---	90	120	100	100
21	120			12	100	140	160	140	110	140	100	110
22	130			120	140	150	140	150	110	140	100	100
23	135			120	140	150	160	140	90	160	100	120
24	135			100	120	140	---	90	100	150	100	120
25	135			100	130	140	160	80	110	120	---	100
26	140			120	140	140	160	100	100	140	110	100
27	140			160	130	160	160	80	120	140	110	100
28	140			140	120	140	140	100	120	160	110	160
29	140			120	---	140	160	100	90	140	110	100
30	145			170	---	180	160	90	110	140	110	100
31	150			110	---	160	---	100	---	130	100	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0			---	.0	.0	6.0	9.0	11.0	14.0	20.0	20.0
2	12.0			---	.0	.0	8.0	10.0	---	17.0	19.0	19.0
3	12.0			---	.0	1.0	7.0	10.0	14.0	17.0	18.0	20.0
4	10.0			---	1.0	2.0	7.0	11.0	12.0	14.0	18.0	18.0
5	9.0			---	.0	1.0	8.0	14.0	12.0	16.0	20.0	14.0
6	9.0			---	.0	2.0	10.0	13.0	11.0	17.0	17.0	20.0
7	---			---	1.0	3.0	9.0	8.0	12.0	16.0	18.0	20.0
8	9.0			---	.0	4.0	10.0	7.0	14.0	17.0	19.0	17.0
9	9.0			---	.0	5.0	4.0	15.0	11.0	16.0	19.0	20.0
10	5.0			---	.0	2.0	3.0	13.0	---	18.0	20.0	17.0
11	---			---	.0	.0	10.0	9.0	13.0	16.0	18.0	15.0
12	7.0			---	.0	.0	10.0	12.0	11.0	18.0	17.0	9.0
13	8.0			---	.0	2.0	7.0	10.0	12.0	17.0	18.0	13.0
14	9.0			.0	.0	.0	9.0	9.0	15.0	17.0	19.0	11.0
15	10.0			.0	.0	.0	9.0	16.0	15.0	15.0	---	10.0
16	10.0			.0	.0	.0	7.0	13.0	10.0	18.0	17.0	16.0
17	10.0			.0	.0	1.0	3.0	14.0	14.0	18.0	18.0	15.0
18	9.0			.0	.0	2.0	7.0	10.0	15.0	16.0	19.0	11.0
19	9.0			.0	.0	2.0	9.0	14.0	12.0	15.0	19.0	10.0
20	7.0			.0	.0	1.0	10.0	---	17.0	17.0	17.0	10.0
21	7.0			.0	.0	2.0	8.0	10.0	13.0	18.0	19.0	6.0
22	7.0			.0	.0	.0	4.0	8.0	14.0	12.0	16.0	15.0
23	7.0			.0	.0	.0	5.0	10.0	13.0	16.0	18.0	15.0
24	7.0			.0	.0	1.0	---	12.0	17.0	16.0	18.0	13.0
25	8.0			.0	.0	1.0	9.0	12.0	16.0	20.0	---	17.0
26	8.0			.0	.0	6.0	10.0	12.0	14.0	18.0	18.0	9.0
27	8.0			.0	.0	2.0	6.0	10.0	16.0	22.0	19.0	14.0
28	7.0			.0	.0	2.0	8.0	10.0	16.0	18.0	18.0	8.0
29	7.0			.0	---	7.0	7.0	13.0	14.0	18.0	19.0	13.0
30	5.0			.0	---	4.0	6.0	10.0	15.0	16.0	16.0	11.0
31	---			.0	---	10.0	---	8.0	---	17.0	19.0	---

09034900 BOBTAIL CREEK NEAR JONES PASS, CO

LOCATION.--Lat 39°45'37", long 105°54'21", in sec.28, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 320 ft (98 m) upstream from diversion dam and 0.4 mi (0.6 km) south of entrance to August P. Gumlick Tunnel.

DRAINAGE AREA.--5.49 mi^2 (14.21 km^2).

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WRD Colo. 1968: 1966(M).

GAGE.--Water-stage recorder. Altitude of gage is 10,430 ft (3,179 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 9.63 ft^3/s (0.273 m^3/s), 6,980 acre-ft/yr (8.61 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 187 ft^3/s (5.30 m^3/s) June 20, 1968, gage height, 4.71 ft (1.436 m); maximum recorded gage height, 6.26 ft (1.908 m) May 16, 1978 (backwater from ice); minimum daily discharge, 0.44 ft^3/s (0.012 m^3/s) Feb. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft^3/s (5.13 m^3/s) at 0015 June 24, gage height, 4.60 ft (1.402 m), only peak above base of 90 ft^3/s (2.5 m^3/s); maximum recorded gage height 6.26 ft (1.908 m) May 16 (backwater from ice); minimum daily, 0.75 ft^3/s (0.021 m^3/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.9	1.1	.80	.80	.85	1.2	1.5	22	85	13	3.5
2	1.7	2.1	1.1	.80	.80	.85	1.2	1.5	22	75	13	3.6
3	1.7	2.1	1.1	.80	.80	.85	1.2	1.5	23	70	12	3.5
4	1.6	2.1	1.1	.80	.80	.85	1.2	1.5	24	64	10	3.3
5	2.4	1.8	1.1	.80	.80	.85	1.2	1.5	22	57	9.1	3.3
6	4.0	1.6	1.1	.80	.80	.85	1.2	1.5	28	53	8.4	2.9
7	2.7	1.3	1.1	.80	.80	.85	1.2	1.4	32	53	8.4	2.7
8	2.1	1.2	1.1	.80	.80	.85	1.2	1.4	40	50	7.6	2.6
9	2.2	1.2	1.1	.80	.80	.85	1.2	1.6	60	47	7.4	2.4
10	2.2	1.2	1.1	.80	.80	.90	1.2	1.9	75	46	7.6	2.6
11	2.6	1.2	1.1	.80	.80	.90	1.2	2.4	80	46	6.8	3.3
12	3.8	1.2	1.1	.80	.80	.90	1.2	2.9	90	42	7.1	2.7
13	3.5	1.2	1.1	.80	.80	.90	1.2	3.5	100	36	7.1	2.6
14	2.2	1.2	1.1	.80	.80	.90	1.2	5.6	120	33	7.6	2.4
15	2.4	1.2	1.1	.80	.80	.90	1.2	9.5	130	30	7.4	2.4
16	2.4	1.1	1.0	.80	.80	.90	1.2	15	100	32	6.1	2.1
17	2.4	1.1	1.0	.80	.75	.90	1.2	13	75	28	5.5	2.6
18	1.9	1.1	1.0	.80	.80	.95	1.2	10	76	25	7.6	2.2
19	1.9	1.1	1.0	.80	.80	1.0	1.2	12	85	25	5.3	2.4
20	1.8	1.1	1.0	.80	.80	1.0	1.2	20	89	22	4.8	2.9
21	1.8	1.1	.90	.80	.80	1.0	1.3	19	102	20	7.8	3.5
22	1.7	1.1	.90	.80	.80	1.0	1.4	18	123	17	5.5	3.1
23	1.7	1.1	.90	.80	.80	1.0	1.2	18	127	16	4.6	2.6
24	1.7	1.1	.90	.80	.80	1.0	1.2	18	138	15	4.6	2.1
25	1.6	1.1	.90	.80	.80	1.0	1.3	19	119	14	4.8	1.9
26	2.1	1.1	.90	.80	.80	1.0	1.6	17	109	13	4.2	1.8
27	1.7	1.1	.90	.80	.85	1.0	2.0	16	106	13	3.8	1.8
28	1.6	1.1	.90	.80	.85	1.1	1.8	15	105	14	3.6	1.7
29	1.4	1.1	.90	.80	---	1.2	1.7	16	113	18	3.6	1.6
30	1.4	1.1	.80	.80	---	1.2	1.6	17	98	16	3.5	1.6
31	1.6	---	.80	.80	---	1.2	---	20	---	13	3.5	---
TOTAL	65.5	39.0	31.20	24.80	22.45	29.50	39.1	302.2	2433	1088	211.3	77.7
MEAN	2.11	1.30	1.01	.80	.80	.95	1.30	9.75	81.1	35.1	6.82	2.59
MAX	4.0	2.1	1.1	.80	.85	1.2	2.0	20	138	85	13	3.6
MIN	1.4	1.1	.80	.80	.75	.85	1.2	1.4	22	13	3.5	1.6
AC-FT	130	77	62	49	45	59	78	599	4830	2160	419	154

CAL YR 1977 TOTAL 2278.35 MEAN 6.24 MAX 88 MIN .60 AC-FT 4520
WTR YR 1978 TOTAL 4363.75 MEAN 12.0 MAX 138 MIN .75 AC-FT 8660

NOTE.--NO GAGE-HEIGHT RECORD NOV. 7 TO JUNE 16.

09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO

LOCATION.--Lat 39°46'44", long 105°55'40", in sec.20, T.3 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 700 ft (210 m) downstream from Steelman Creek and 6.5 mi (10.5 km) southeast of Leal.

DRAINAGE AREA.--16.3 mi² (42.2 km²).

PERIOD OF RECORD.--July 1933 to September 1941, published as Williams River below Steelman Creek, October 1965 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Altitude of gage is 9,800 ft (2,987 m), from topographic map. Prior to July 21, 1933, nonrecording gage, and July 21, 1933, to Sept. 30, 1941, water-stage recorder at site 600 ft (180 m) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station through August P. Gumlick Tunnel (station 09036000) since May 10, 1940. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 25.2 ft³/s (0.714 m³/s), 18,260 acre-ft/yr (22.5 hm³/yr), including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft³/s (12.5 m³/s) June 21, 1936, gage height, 2.48 ft (0.756 m), site and datum then in use, from rating curve extended above 260 ft³/s (7.4 m³/s); maximum gage height, 5.66 ft (1.725 m) May 10, 1973 (backwater from ice); minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 355 ft³/s (10.1 m³/s) at 1745 June 15, gage height, 5.55 ft (1.692 m); minimum daily, 0.25 ft³/s (0.007 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	1.0	.45	.30	.30	.35	1.1	1.6	13	207	10	8.5
2	.78	1.0	.45	.30	.30	.35	1.0	1.5	19	198	9.6	8.5
3	.90	.95	.45	.30	.30	.35	1.0	1.5	14	153	9.3	8.5
4	1.1	.90	.45	.30	.30	.35	1.0	1.6	14	92	8.5	8.5
5	2.4	.90	.45	.30	.30	.35	.95	1.5	24	113	8.5	8.1
6	5.0	.90	.45	.30	.30	.35	.95	1.3	14	138	8.1	7.4
7	2.9	.85	.55	.30	.30	.35	1.1	1.2	14	132	8.1	7.1
8	1.7	.75	.40	.30	.30	.35	1.3	1.1	23	125	8.1	6.8
9	1.5	.70	.40	.30	.40	.35	1.3	1.2	27	117	8.1	7.1
10	1.7	.70	.40	.30	.30	.35	1.2	1.6	44	119	7.7	7.1
11	1.7	.70	.40	.30	.30	.35	1.2	1.8	81	110	8.5	7.4
12	1.7	.70	.50	.30	.30	.35	1.4	1.8	171	108	8.9	7.4
13	1.4	.70	.40	.50	.30	.35	1.3	1.9	207	102	8.9	7.1
14	1.2	.70	.40	.30	.30	.35	1.2	3.4	221	93	9.3	7.1
15	1.1	.70	.40	.30	.30	.40	1.1	6.2	253	86	9.3	7.7
16	1.1	.65	.40	.30	.30	.40	1.2	24	253	54	8.9	7.1
17	1.3	.60	.40	.30	.30	.40	1.2	18	229	40	8.9	8.5
18	1.2	.55	.40	.30	.25	.40	1.1	10	224	23	8.5	7.7
19	1.1	.55	.35	.30	.30	.40	1.1	7.7	209	26	8.5	8.1
20	1.1	.55	.45	.30	.30	.40	1.4	9.6	209	15	8.5	8.9
21	1.4	.55	.35	.30	.30	.40	1.6	10	196	10	8.5	9.3
22	1.2	.50	.35	.30	.30	.40	2.2	17	221	9.6	8.5	8.5
23	1.2	.50	.35	.30	.30	.40	1.1	14	268	9.3	8.5	8.1
24	1.2	.50	.35	.30	.30	.55	1.1	16	268	12	8.5	7.7
25	1.2	.50	.35	.30	.30	.40	1.2	15	279	9.6	8.5	7.4
26	3.5	.50	.35	.30	.30	.40	1.8	14	252	9.3	8.5	5.8
27	1.3	.45	.35	.30	.30	.45	2.3	12	241	8.9	8.5	6.5
28	1.1	.55	.45	.30	.35	.50	2.2	11	236	9.3	8.1	6.2
29	1.1	.45	.35	.30	---	.55	1.9	12	231	10	8.1	5.9
30	1.1	.45	.35	.30	---	.65	1.6	14	236	10	8.1	5.6
31	1.1	---	.30	.30	---	.95	---	13	---	9.6	8.1	---
TOTAL	47.06	20.00	12.45	9.50	8.50	12.95	40.10	246.5	4701	2159.6	266.1	226.6
MEAN	1.52	.67	.40	.31	.30	.42	1.34	7.95	157	69.7	8.58	7.55
MAX	5.0	1.0	.55	.50	.40	.95	2.3	24	279	207	10	9.3
MIN	.78	.45	.30	.30	.25	.35	.95	1.1	13	8.9	7.7	5.6
AC-FT	93	40	25	19	17	26	80	489	9320	4280	528	449

CAL YR 1977 TOTAL 1875.88 MEAN 5.14 MAX 104 MIN .30 AC-FT 3720
WTR YR 1978 TOTAL 7750.36 MEAN 21.2 MAX 279 MIN .25 AC-FT 15370

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO APR. 21.

09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO

LOCATION.--Lat 39°47'22", long 106°01'18", in NW¼SW¼ sec.16, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 1.0 mi (1.6 km) upstream from Darling Creek and 1.9 mi (3.1 km) southeast of Leal. Prior to Oct. 1, 1972, at site 0.6 mi (1.0 km) downstream.

DRAINAGE AREA.--34.7 mi² (89.9 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,970 ft (2,734 m), from topographic map. Prior to Oct. 1, 1972, at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records good. Transmountain diversion above station through August P. Gumlick Tunnel (station 09036000). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 37.0 ft³/s (1.008 m³/s), 25,790 acre-ft/yr (31.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 677 ft³/s (19.2 m³/s) June 24, 1971, gage height, 7.12 ft (2.170 m), site and datum then in use, from rating curve extended above 430 ft³/s (12 m³/s); minimum daily, 2.7 ft³/s (0.076 m³/s) Apr. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 359 ft³/s (10.2 m³/s) at 0100 June 16, gage height, 4.62 ft (1.408 m); minimum daily, 4.0 ft³/s (0.11 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	6.5	6.0	6.0	4.5	5.0	8.0	14	62	250	32	17
2	7.6	6.5	6.0	6.0	4.5	5.0	7.2	14	70	220	31	16
3	8.0	6.5	6.0	6.0	4.5	5.0	7.0	15	90	180	30	16
4	9.0	6.5	6.0	6.0	4.5	5.0	7.0	14	90	160	28	16
5	10	6.5	6.0	6.0	4.5	5.0	7.0	14	97	160	27	16
6	9.5	6.5	6.0	6.0	4.5	5.0	7.0	13	91	150	26	15
7	8.0	6.0	6.0	6.0	4.5	5.0	8.5	13	91	150	25	15
8	8.0	6.0	6.0	6.0	4.5	5.0	8.5	13	96	140	24	15
9	8.0	6.0	6.0	6.0	4.5	5.0	8.0	12	88	140	24	15
10	8.0	6.0	6.0	6.0	4.5	5.0	8.0	12	126	140	23	15
11	7.5	6.0	6.0	6.0	4.5	5.0	8.5	15	179	130	23	15
12	7.5	6.0	6.0	6.0	4.5	5.0	9.5	14	220	120	22	15
13	7.5	6.0	6.0	6.0	4.5	5.0	9.5	14	283	120	21	15
14	7.5	6.0	6.0	6.0	4.5	5.0	9.5	22	262	110	21	14
15	7.5	6.0	6.0	6.0	4.5	5.0	9.5	35	314	110	21	13
16	7.5	6.0	6.0	6.0	4.5	5.0	9.5	45	347	100	20	13
17	7.5	5.5	6.0	6.0	4.0	5.0	8.5	55	330	89	19	14
18	7.5	5.5	6.0	6.0	4.5	5.0	8.5	40	313	83	19	16
19	7.5	5.5	6.0	6.0	4.5	5.0	8.5	38	302	78	18	16
20	7.5	5.5	6.0	6.0	4.5	5.0	8.8	41	287	73	18	16
21	7.5	5.5	6.0	5.5	4.5	5.0	10	44	286	69	19	17
22	7.5	5.5	6.0	5.0	4.5	5.0	9.0	49	301	64	20	16
23	7.0	5.5	6.0	4.5	4.5	5.0	7.8	65	321	58	20	14
24	7.0	5.5	6.0	4.5	4.5	5.0	8.1	63	340	54	20	13
25	7.0	5.5	6.0	4.5	4.5	5.0	11	64	340	50	20	13
26	7.0	5.5	6.0	4.5	5.0	5.0	15	59	320	46	19	12
27	7.0	5.5	6.0	4.5	5.0	5.5	18	56	290	43	18	12
28	7.0	6.0	6.0	4.5	5.0	5.5	15	54	280	40	17	12
29	7.0	6.0	6.0	4.5	---	6.0	15	52	260	38	17	11
30	7.0	6.0	6.0	4.5	---	6.5	15	59	260	36	17	10
31	7.0	---	6.0	4.5	---	7.0	---	63	---	34	17	---
TOTAL	236.7	177.5	186.0	171.0	127.0	160.5	290.4	1081	6736	3235	676	433
MEAN	7.64	5.92	6.00	5.52	4.54	5.18	9.68	34.9	225	104	21.8	14.4
MAX	10	6.5	6.0	6.0	5.0	7.0	18	65	347	250	32	17
MIN	7.0	5.5	6.0	4.5	4.0	5.0	7.0	12	62	34	17	10
AC-FT	469	352	369	339	252	318	576	2140	13360	6420	1340	859

CAL YR 1977 TOTAL 6609.1 MEAN 18.1 MAX 250 MIN 2.7 AC-FT 13110
WTR YR 1978 TOTAL 13510.1 MEAN 37.0 MAX 347 MIN 4.0 AC-FT 26800

NOTE.--NO GAGE-HEIGHT RECORD AUG. 23 TO SEPT. 30.

09035800 DARLING CREEK NEAR LEAL, CO

LOCATION.--Lat 39°48'17", long 106°01'11", in NE¼SW¼ sec.9, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 0.6 mi (1.0 km) upstream from mouth and 1.4 mi (2.3 km) southeast of Leal.

DRAINAGE AREA.--8.18 mi² (21.2 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,090 ft (2,771 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are publisned elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 9.15 ft³/s (0.259 m³/s), 6,630 acre-ft/yr (8.17 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 224 ft³/s (6.34 m³/s) June 20, 1968, gage height, 3.62 ft (1.103 m), from rating curve extended above 80 ft³/s (2.3 m³/s); maximum gage height, 3.91 ft (1.192 m) June 25, 1971; minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Jan. 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 141 ft³/s (3.99 m³/s) at 2000 June 15, gage height, 3.85 ft (1.173 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Dec. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.0	2.2	2.2	2.0	2.0	3.5	3.8	24	53	10	3.5
2	2.9	2.5	2.2	2.2	2.0	2.0	3.3	3.7	25	49	9.3	3.4
3	2.9	2.4	2.1	2.2	2.0	2.0	3.0	3.8	28	45	8.3	3.3
4	2.8	2.5	1.9	2.2	2.0	2.0	2.8	3.9	29	41	7.8	3.2
5	3.1	2.5	1.7	2.2	2.0	2.0	2.8	3.8	26	36	7.5	3.1
6	3.7	2.4	1.6	2.2	2.0	2.2	2.9	3.7	26	31	7.3	3.0
7	4.1	2.4	1.9	2.2	2.0	2.0	3.3	3.6	27	29	7.2	2.9
8	3.4	1.9	2.3	2.2	2.0	1.9	4.0	3.6	29	27	7.0	2.9
9	3.1	1.9	2.3	2.2	2.0	1.8	4.0	3.6	42	26	7.0	2.9
10	3.0	2.5	2.3	2.2	2.0	1.9	3.5	4.4	69	24	7.0	3.0
11	3.8	2.4	2.3	2.2	2.0	1.8	3.5	4.8	80	23	7.0	3.3
12	4.0	2.4	2.3	2.2	2.0	1.7	3.5	5.0	83	22	7.2	3.3
13	3.2	2.4	2.3	2.2	2.0	1.7	3.5	5.4	90	21	7.4	3.1
14	3.2	2.4	2.3	2.2	2.0	1.7	3.5	7.0	95	19	7.8	2.9
15	3.2	2.4	2.3	2.2	2.0	1.7	3.5	8.4	109	18	8.0	2.8
16	3.2	2.4	2.3	2.2	2.0	1.7	3.5	11	105	18	7.2	2.7
17	3.1	2.3	2.3	2.2	2.0	1.7	3.5	16	89	18	6.8	3.1
18	3.1	2.3	2.3	2.2	2.0	1.7	3.5	13	82	16	6.2	2.9
19	3.0	2.2	2.4	2.2	2.0	1.8	3.5	10	77	15	6.0	3.0
20	2.9	2.2	2.4	2.2	2.0	1.7	3.5	10	78	15	5.6	3.3
21	3.0	2.2	2.4	2.0	2.0	1.8	3.5	11	79	14	5.2	3.2
22	3.0	2.2	2.4	2.0	2.0	1.8	3.5	12	83	13	5.0	3.1
23	2.8	2.2	2.4	2.0	2.0	1.7	3.3	17	86	13	4.6	2.9
24	2.7	2.2	2.4	2.0	2.0	1.7	3.2	23	85	12	4.6	2.8
25	2.8	2.2	2.4	2.0	2.0	1.7	3.2	22	84	11	4.5	2.7
26	2.7	2.2	2.2	2.0	2.0	1.7	3.3	21	74	9.9	4.3	2.7
27	2.7	2.2	2.2	2.0	2.0	1.8	3.7	21	66	9.3	4.1	2.5
28	2.6	2.2	2.2	2.0	2.0	2.0	5.0	19	61	9.3	3.9	2.4
29	2.6	2.2	2.2	2.0	---	2.3	4.5	19	61	11	3.8	2.4
30	2.7	2.2	2.2	2.0	---	2.6	4.0	22	61	11	3.7	2.5
31	2.2	---	2.2	2.0	---	2.8	---	24	---	9.1	3.6	---
TOTAL	94.4	68.4	68.9	66.0	56.0	58.9	105.3	339.5	1953	668.6	194.9	88.8
MEAN	3.05	2.28	2.22	2.13	2.00	1.90	3.51	11.0	65.1	21.6	6.29	2.96
MAX	4.1	2.5	2.4	2.2	2.0	2.8	5.0	24	109	53	10	3.5
MIN	2.2	1.9	1.6	2.0	2.0	1.7	2.8	3.6	24	9.1	3.6	2.4
AC-FT	187	136	137	131	111	117	209	673	3870	1330	387	176

CAL YR 1977 TOTAL 1976.7 MEAN 5.42 MAX 43 MIN 1.6 AC-FT 3920
WTR YR 1978 TOTAL 3762.7 MEAN 10.3 MAX 109 MIN 1.6 AC-FT 7460

NOTE.--NO GAGE-HEIGHT RECORD DEC. 8 TO MAR. 5, MAR. 21 TO MAY 31.

09035900 SOUTH FORK OF WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°47'44", long 106°01'49", in NE¼ sec.17, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 800 ft (244 m) upstream from highway bridge, 0.6 mi (1.0 km) upstream from mouth, and 1.2 mi (1.9 km) southeast of Leal.

DRAINAGE AREA.--27.2 mi² (70.4 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,950 ft (2,728 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 30.3 ft³/s (0.858 m³/s), 21,950 acre-ft/yr (27.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 464 ft³/s (13.1 m³/s) June 15, 1978, gage height 3.37 ft (1.027 m); maximum gage height, 3.85 ft (1.173 m) Nov. 27, 1976 (backwater from ice); minimum daily discharge, 2.6 ft³/s (0.074 m³/s) Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 464 ft³/s (13.1 m³/s) at 2300 June 15, gage height, 3.37 ft (1.027 m), only peak above base of 200 ft³/s (5.7 m³/s); minimum daily discharge, 7.6 ft³/s (0.22 m³/s) Jan. 26 to Feb. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	9.0	8.8	7.6	7.8	9.6	15	66	191	40	16
2	10	10	10	8.8	7.6	7.8	9.6	15	69	174	41	15
3	10	10	10	8.8	7.6	7.8	9.4	16	74	168	36	16
4	10	10	9.9	8.8	7.6	7.8	9.0	16	75	154	34	15
5	11	10	8.1	8.8	7.6	7.8	9.0	16	67	140	32	15
6	12	10	9.8	8.8	7.6	7.8	9.0	18	71	132	31	14
7	14	10	9.8	8.8	7.6	7.8	9.4	32	81	121	31	14
8	12	10	9.9	8.8	7.6	7.8	12	21	80	111	30	14
9	11	8.4	9.7	8.8	7.6	7.8	11	19	94	102	30	13
10	11	10	9.6	8.8	7.6	7.8	9.2	14	140	101	28	14
11	9.2	10	9.2	8.8	7.6	7.8	9.8	16	156	100	28	14
12	9.0	10	9.2	8.8	7.6	7.8	11	16	167	95	27	14
13	9.0	10	9.1	8.6	7.6	7.8	12	17	208	86	28	13
14	10	10	9.2	8.6	7.6	7.8	12	24	249	79	28	13
15	11	10	9.0	8.6	7.6	7.8	12	36	315	75	28	13
16	11	10	8.8	8.4	7.6	7.8	11	48	320	74	26	13
17	11	10	8.8	8.2	7.6	7.8	9.4	52	355	72	23	13
18	11	10	9.2	8.2	7.6	7.8	9.4	38	306	67	23	13
19	11	9.0	8.9	8.2	7.6	7.8	9.4	34	255	62	22	13
20	11	10	8.8	8.2	7.6	7.8	9.6	42	245	60	21	13
21	11	10	8.8	8.2	7.6	7.8	10	49	256	57	21	13
22	11	10	8.8	8.2	7.6	7.8	11	59	285	53	21	13
23	11	10	8.8	8.2	7.6	7.8	12	70	310	50	20	13
24	11	10	8.8	8.0	7.6	7.8	12	70	330	47	19	12
25	11	10	8.8	7.8	7.6	7.8	13	69	345	44	19	12
26	10	10	8.8	7.6	7.6	7.8	16	66	310	42	18	12
27	10	9.5	8.8	7.6	7.6	7.8	18	63	255	40	18	12
28	10	9.8	8.8	7.6	7.6	8.0	17	57	230	40	17	11
29	10	9.5	8.8	7.6	---	8.4	16	55	220	41	16	11
30	10	9.3	8.8	7.6	---	9.0	16	62	234	50	16	11
31	10	---	8.8	7.6	---	9.6	---	66	---	41	16	---
TOTAL	330.2	295.5	282.8	258.6	212.8	245.6	343.8	1191	6168	2669	788	398
MEAN	10.7	9.85	9.12	8.34	7.60	7.92	11.5	38.4	206	86.1	25.4	13.3
MAX	14	10	10	8.8	7.6	9.6	18	70	355	191	41	16
MIN	9.0	8.4	8.1	7.6	7.6	7.8	9.0	14	66	40	16	11
AC-FT	655	586	561	513	422	487	682	2360	12230	5290	1560	789

CAL YR 1977 TOTAL 7263.9 MEAN 19.9 MAX 132 MIN 6.8 AC-FT 14410
WTR YR 1978 TOTAL 13183.3 MEAN 36.1 MAX 355 MIN 7.6 AC-FT 26150

NOTE.--NO GAGE-HEIGHT RECORD JAN. 13 TO APR. 25.

09036000 WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°49'53", long 106°03'15", in sec.31, T.2 S., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank at downstream side of bridge, 100 ft (30 m) downstream from Kinney Creek, and 1.7 mi (2.7 km) northwest of Leal.

DRAINAGE AREA.--89.3 mi² (231.3 km²).

PERIOD OF RECORD.--July 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Prior to October 1958, published as Williams River near Leal.

REVISED RECORDS.--WSP 1733: 1951. WSP 2124: Drainage area. WRD Colo. 1973: 1972.

GAGE.--Water-stage recorder. Altitude of gage is 8,790 ft (2,679 m), from topographic map. Prior to Aug. 15, 1953, at site 15 ft (5 m) downstream at same datum.

REMARKS.--Records good. Transmountain diversion above station through August P. Gumlick Tunnel (see table below for figures of diversion). Diversions above station for irrigation of about 200 acres (809,000 m²) of hay meadows above station and about 40 acres (162,000 m²) below. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through August P. Gumlick Tunnel, furnished by Colorado Division of Water Resources.

AVERAGE DISCHARGE.--45 years, 102 ft³/s (2.889 m³/s), 73,900 acre-ft/yr (91.1 hm³/yr), including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) June 10, 1952, gage height, 4.23 ft (1.289 m); maximum gage height, 5.46 ft (1.664 m) June 29, 1971 (backwater from log); minimum daily discharge, 13 ft³/s (0.37 m³/s) at times in 1939, 1963, 1964, and 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190 ft³/s (33.7 m³/s) at 0200 June 17, gage height, 3.55 ft (1.082 m); minimum daily, 15 ft³/s (0.42 m³/s) Feb. 18-27, Mar. 1, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	18	18	17	16	15	31	45	214	704	100	44
2	22	18	19	16	16	16	28	44	223	649	104	42
3	21	18	19	17	16	16	28	47	231	594	90	43
4	21	18	20	17	16	16	27	47	244	469	85	43
5	22	19	17	17	16	16	27	43	242	447	80	41
6	26	19	19	16	16	16	26	40	227	450	76	40
7	35	21	20	17	16	16	30	36	256	407	78	38
8	26	20	20	16	16	15	37	36	263	376	78	39
9	23	16	19	17	16	15	38	36	303	356	77	39
10	24	19	19	17	16	16	32	43	421	334	74	39
11	21	20	19	17	16	16	33	50	538	310	71	41
12	21	20	19	17	16	16	38	52	632	287	72	42
13	24	19	19	16	16	16	35	52	723	260	77	38
14	23	19	19	16	16	16	34	72	735	233	81	37
15	23	20	19	17	16	16	34	111	834	210	85	35
16	22	19	19	17	16	16	35	162	988	198	76	34
17	22	19	18	16	16	16	35	194	1020	207	68	36
18	25	19	18	17	15	17	30	146	926	179	66	38
19	25	19	18	17	15	17	30	123	913	183	67	37
20	24	17	18	17	15	17	32	132	892	162	62	42
21	23	18	17	17	15	17	35	154	861	142	63	39
22	24	20	18	16	15	18	35	162	934	127	65	43
23	22	19	18	16	15	17	33	200	1010	118	59	40
24	21	19	18	16	15	17	34	235	997	118	54	37
25	20	19	18	16	15	17	40	232	994	106	52	35
26	20	20	17	16	15	17	47	221	914	99	50	34
27	20	19	17	16	15	17	55	217	827	93	47	33
28	19	19	17	16	16	19	50	198	793	92	45	31
29	19	19	17	16	---	21	50	184	773	104	44	31
30	19	19	17	16	---	23	49	205	795	121	44	29
31	20	---	17	16	---	29	---	217	---	99	44	---
TOTAL	700	568	567	511	438	532	1068	3736	19723	8234	2134	1140
MEAN	22.6	18.9	18.3	16.5	15.6	17.2	35.6	121	657	266	68.8	38.0
MAX	35	21	20	17	16	29	55	235	1020	704	104	44
MIN	19	16	17	16	15	15	26	36	214	92	44	29
AC-FT	1390	1130	1120	1010	869	1060	2120	7410	39120	16330	4230	2260
a	342	164	104	83	62	60	126	1040	1500	1190	492	1.7

CAL YR 1977 TOTAL 19111 MEAN 52.4 MAX 498 MIN 15 AC-FT 37910
WTR YR 1978 TOTAL 39351 MEAN 108 MAX 1020 MIN 15 AC-FT 78050

a Diversions, in acre-feet, through August P. Gumlick Tunnel, furnished by Colorado Division of Water Resources.

09037500 WILLIAMS FORK NEAR PARSHALL, CO

LOCATION.--Lat 40°00'01", long 106°10'45", in SW¼SW¼ sec.31, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on right bank 150 ft (46 m) downstream from bridge on State Highway 286, 3.7 mi (6.0 km) downstream from Skylark Creek, 3.9 mi (6.3 km) south of Parshall, and 4.2 mi (6.8 km) upstream from Williams Fork Reservoir Dam.

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--July 1904 to September 1924, June 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Published as "near (Hot) Sulphur Springs" 1904-12 and as Williams River near Parshall June 1933 to September 1958.

REVISED RECORDS.--WSP 1243: 1918. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,808.95 ft (2,380.168 m) (Denver Board of Water Commissioners Datum). See WSP 1733 for history of changes prior to Aug. 9, 1938.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversion above station through August P. Gumlick Tunnel (station 09036000). Diversions above station for irrigation of about 1,300 acres (5.26 km²) above station and about 2,500 acres (10.1 km²) below. About 150 acres (607,000 m²) above station irrigated by diversions into the drainage area. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--65 years, 137 ft³/s (3.880 m³/s), 99,260 acre-ft/yr (122 hm³/yr), including diversion to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,620 ft³/s (74.2 m³/s) June 14, 1918, gage height, 6.05 ft (1.884 m), site and datum then in use, from rating curve extended above 1,400 ft³/s (40 m³/s); minimum daily, 4.8 ft³/s (0.14 m³/s) May 6, 8-10, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft³/s (36.0 m³/s) at 0400 June 16, gage height, 4.78 ft (1.457 m); minimum daily, 22 ft³/s (0.62 m³/s) July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	40	34	30	29	27	62	73	155	616	103	46
2	39	39	34	30	29	29	56	72	161	525	109	45
3	39	42	37	30	29	29	55	77	165	470	96	45
4	38	42	37	30	29	29	53	80	183	316	92	45
5	41	45	31	30	29	29	55	75	174	278	86	43
6	51	46	35	30	29	29	51	70	173	274	85	39
7	65	49	37	30	29	29	59	65	193	254	79	36
8	55	40	37	30	29	29	70	65	198	229	80	34
9	48	33	37	30	29	29	75	62	227	212	78	35
10	47	39	37	30	29	27	63	74	365	195	75	34
11	40	46	37	30	29	27	61	79	538	182	77	37
12	41	44	37	30	29	26	73	78	606	165	73	38
13	45	43	37	30	29	26	68	79	851	143	74	35
14	46	41	37	30	29	25	66	105	929	129	78	39
15	45	40	37	30	29	25	66	149	924	114	85	45
16	45	38	37	30	27	25	68	208	1030	99	75	44
17	44	33	35	30	27	26	72	255	932	82	68	45
18	45	35	35	30	27	27	62	183	780	68	64	49
19	47	35	35	30	27	28	60	111	756	52	66	47
20	43	26	35	30	27	28	64	80	733	50	64	51
21	44	34	35	30	27	29	68	92	726	39	63	50
22	45	38	35	29	27	29	70	120	756	24	60	51
23	44	38	35	29	27	29	65	162	860	22	62	48
24	42	38	35	29	27	28	63	213	892	24	58	46
25	42	36	32	29	27	29	73	226	900	33	55	44
26	41	36	32	29	27	29	82	205	820	35	53	45
27	41	36	32	29	27	31	96	198	698	31	51	42
28	40	35	32	29	27	35	88	167	652	30	48	40
29	40	35	32	29	---	40	81	139	640	32	48	39
30	44	34	32	29	---	46	79	158	712	60	48	37
31	42	---	32	29	---	57	---	180	---	86	46	---
TOTAL	1371	1156	1082	920	786	931	2024	3900	17729	4869	2199	1274
MEAN	44.2	38.5	34.9	29.7	28.1	30.0	67.5	126	591	157	70.9	42.5
MAX	65	49	37	30	29	57	96	255	1030	616	109	51
MIN	38	26	31	29	27	25	51	62	155	22	46	34
AC-FT	2720	2290	2150	1820	1560	1850	4010	7740	35170	9660	4350	2530

CAL YR 1977 TOTAL 15082.7 MEAN 41.3 MAX 336 MIN 7.9 AC-FT 29920
WTR YR 1978 TOTAL 38241.0 MEAN 105 MAX 1030 MIN 22 AC-FT 75850

09038000 WILLIAMS FORK RESERVOIR NEAR PARSHALL, CO

LOCATION.--Lat 40°02'06", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, at dam on Williams Fork, 2.1 mi (3.4 km) upstream from mouth, and 2.2 mi (3.5 km) southwest of Parshall.

DRAINAGE AREA.--230 mi^2 (596 km^2).

PERIOD OF RECORD.--April 1939 to current year. Prior to October 1948, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city engineer of Denver); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by concrete-arch dam completed in October 1938; storage began April 1939; dam was enlarged Dec. 5, 1956, to Apr. 22, 1959. Enlarged capacity, 96,820 acre-ft (119 hm^3) between elevations 7,634 ft (2,326.8 m), invert of outlet, and 7,811 ft (2,380.8 m), top of radial gates on spillway. No dead storage. Figures given represent usable contents. Reservoir is used for power development and to store water to compensate for water diverted through August P. Gumlick Tunnel. Water is released during periods of low flow in Colorado to supply decreed prior water rights. Records furnished by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 97,130 acre-ft (120 hm^3) July 9, 1962, elevation, 7,811.19 ft (2,380.851 m); no contents at times in 1958 (construction) and 1966 (drained for repairs).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 86,110 acre-ft (106 hm^3) Aug. 9, elevation, 7,804.05 ft (2,378.677 m); minimum, 25,870 acre-ft (31.9 hm^3) Apr. 3, elevation, 7,745.20 ft (2,360.737 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,755.93	33,600	-
Oct. 31	7,751.25	30,080	-3,520
Nov. 30	7,749.70	28,970	-1,110
Dec. 31	7,747.90	27,710	-1,260
CAL YR 1977			-28,580
Jan. 31	7,746.95	27,050	-660
Feb. 28	7,745.95	26,370	-680
Mar. 31	7,745.65	26,170	-200
Apr. 30	7,750.48	29,530	+3,360
May 31	7,759.80	36,700	+7,170
June 30	7,794.25	72,600	+35,900
July 31	7,802.99	84,550	+11,950
Aug. 31	7,802.40	83,700	-850
Sept. 30	7,793.75	71,950	-11,750
WTR YR 1978			+38,350

09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO

LOCATION.--Lat 40°02'07", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, on left bank 400 ft (120 m) downstream from Williams Fork Reservoir, 2.1 mi (3.4 km) upstream from mouth, and 2.1 mi (3.4 km) southwest of Parshall.

DRAINAGE AREA.--230 mi² (596 km²).

PERIOD OF RECORD.--October 1948 to September 1954, August 1958 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1958, published as Williams River below Williams Fork Reservoir.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,615.0 ft (2,321.05 m) (Denver Board of Water Commissioners Datum). See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1959.

REMARKS.--Records good. Flow regulated by Williams Fork Reservoir (station 09038000). Transmountain diversion above station through August P. Gumlick Tunnel (station 09036000). Diversions above station for irrigation of about 3,200 acres (13.0 km²) above station and about 100 acres (405,000 m²) below. About 450 acres (1.82 km²) above station irrigated by diversion into the drainage area. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 122 ft³/s (3.455 m³/s), 88,390 acre-ft/yr (109 hm³/yr), adjusted for storage in Williams Fork Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft³/s (74.8 m³/s) June 20, 1953, gage height, 8.50 ft (2.591 m), site and datum then in use, from rating curve extended above 1,500 ft³/s (42 m³/s); no flow for part of Apr. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 381 ft³/s (10.8 m³/s) at 1300 Oct. 2, gage height, 2.90 ft (0.884 m); minimum daily, 15 ft³/s (0.42 m³/s) Apr. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	96	80	49	51	52	144	29	30	24	23	239
2	379	96	80	49	51	51	168	29	30	24	23	238
3	256	84	80	49	51	50	168	29	30	23	23	237
4	70	70	80	49	51	50	123	29	30	23	23	239
5	60	66	80	49	51	51	17	29	30	22	23	241
6	54	65	76	50	51	51	17	29	30	23	22	240
7	118	65	71	50	51	51	17	29	29	23	23	239
8	158	64	66	50	51	51	17	29	29	22	23	242
9	157	64	61	50	51	51	16	29	30	22	22	242
10	157	64	59	50	51	51	16	29	30	22	106	244
11	129	64	59	50	51	52	16	29	30	23	150	246
12	88	64	59	50	51	52	16	29	30	23	157	246
13	67	64	59	50	51	52	16	29	30	22	157	246
14	67	64	59	51	51	52	16	29	30	22	157	246
15	66	64	59	51	51	52	16	29	30	22	156	248
16	65	64	59	51	51	51	16	30	27	22	206	249
17	65	64	59	51	51	51	16	30	25	23	147	250
18	66	64	59	51	50	51	16	30	24	23	49	249
19	66	64	55	51	50	52	16	30	23	23	22	250
20	65	64	53	51	51	52	16	30	24	23	22	250
21	66	51	52	51	51	52	16	30	24	23	22	250
22	63	43	50	51	51	52	16	30	24	23	22	252
23	63	42	48	51	51	52	16	30	24	23	33	254
24	78	42	48	51	51	52	15	29	23	23	60	255
25	95	48	50	51	51	52	24	28	24	23	95	254
26	95	52	50	51	51	52	29	28	24	23	158	254
27	94	52	50	51	51	52	29	28	23	23	156	257
28	95	52	50	51	51	52	29	29	23	23	177	259
29	95	65	50	51	---	52	29	30	24	23	217	259
30	95	78	49	51	---	52	29	30	24	23	231	258
31	96	---	50	51	---	88	---	30	---	23	238	---
TOTAL	3466	1899	1860	1563	1426	1634	1095	907	808	707	2973	7433
MEAN	112	63.3	60.0	50.4	50.9	52.7	36.5	29.3	26.9	22.8	95.9	248
MAX	379	96	80	51	51	88	168	30	30	24	238	259
MIN	54	42	48	49	50	50	15	28	23	22	22	237
AC-FT	6870	3770	3690	3100	2830	3240	2170	1800	1600	1400	5900	14740

CAL YR 1977 TOTAL 35044 MEAN 96.0 MAX 418 MIN 24 AC-FT 69510
WTR YR 1978 TOTAL 25771 MEAN 70.6 MAX 379 MIN 15 AC-FT 51120

09039000 TROUBLESOME CREEK NEAR PEARMONT, CO

LOCATION.--Lat 40°13'03", long 106°18'45", in SE¼ sec.14, T.3 N., R.80 W., Grand County, Hydrologic Unit 14010001, on left bank 45 ft (14 m) downstream from small tributary, 3 mi (5 km) north of Pearmont, 4 mi (6 km) downstream from Rabbit Ear Creek, 5.2 mi (8.4 km) upstream from East Fork, and 12 mi (19 km) northeast of Kremmling.

DRAINAGE AREA.--44.6 mi^2 (115.5 km^2).

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,049 ft (2,453.3 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. One diversion above station for irrigation of about 250 acres (1.01 km^2) below. Flow partly regulated during irrigation season by one reservoir, capacity, 1,070 acre-ft (1.32 hm^3) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 28.9 ft^3/s (0.818 m^3/s), 20,940 acre-ft/yr (25.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 507 ft^3/s (14.4 m^3/s) June 20, 1978, gage height, 2.63 ft (0.802 m); maximum gage height, 3.93 ft (1.198 m) Mar. 31, 1965 (backwater from ice); minimum daily discharge, 4.5 ft^3/s (0.13 m^3/s) Dec. 20-24, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 507 ft^3/s (14.4 m^3/s) at 1000 June 10, gage height, 2.63 ft (0.802 m); maximum gage height, 3.34 ft (1.018 m) Mar. 10 (backwater from ice); minimum daily discharge, 7.2 ft^3/s (0.20 m^3/s) Nov. 1, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.2	9.2	9.0	8.5	8.0	15	25	261	90	28	18
2	10	7.3	9.4	9.0	8.4	8.2	14	26	261	86	27	18
3	11	7.7	9.6	9.0	9.6	8.2	14	30	253	78	26	17
4	11	7.6	9.8	9.0	8.4	8.0	13	31	255	72	26	17
5	13	7.8	10	9.0	8.4	7.9	14	30	263	70	25	17
6	13	7.8	10	9.0	8.4	8.0	14	28	263	67	24	17
7	15	7.7	10	9.0	8.5	7.7	16	26	281	65	24	17
8	13	7.5	10	9.4	8.3	8.0	19	25	295	62	24	17
9	12	7.4	10	9.6	8.7	8.0	20	25	345	58	23	16
10	12	7.4	10	9.8	8.3	8.2	18	26	444	57	23	17
11	11	7.4	10	10	7.8	8.4	18	30	454	54	22	17
12	11	7.4	10	10	7.9	8.4	19	33	330	52	22	17
13	12	7.4	9.6	10	8.0	8.7	20	38	336	47	22	16
14	11	7.4	9.3	10	8.0	9.2	20	51	388	45	22	16
15	11	7.3	9.3	10	8.0	10	21	73	377	43	22	16
16	11	7.2	9.2	10	8.0	11	22	127	363	42	21	16
17	11	7.3	9.0	10	8.0	11	23	164	283	43	20	17
18	11	7.4	8.8	9.9	8.0	11	21	142	224	40	20	17
19	11	7.7	8.6	9.6	8.0	11	20	113	205	39	20	17
20	11	7.6	8.4	9.6	8.0	8.0	20	109	216	37	20	17
21	9.6	7.6	8.4	9.6	8.0	9.0	21	131	192	37	20	16
22	8.7	7.6	8.4	9.6	8.0	10	21	167	179	35	20	17
23	8.3	8.0	8.4	9.0	8.0	8.7	21	215	177	34	20	17
24	8.2	8.4	8.4	9.0	8.0	8.8	21	277	174	33	19	16
25	8.0	8.4	8.4	8.4	8.1	9.6	23	308	155	33	19	16
26	7.9	8.5	8.4	8.0	8.1	9.0	26	280	125	31	19	15
27	8.0	8.6	8.4	8.0	8.0	9.3	28	270	112	31	19	15
28	7.9	8.7	8.4	8.0	8.1	10	27	242	106	30	18	15
29	7.9	8.8	9.0	8.0	---	11	26	217	100	30	18	15
30	8.6	9.0	9.0	8.8	---	12	26	232	95	28	18	15
31	8.2	---	9.0	8.6	---	14	---	269	---	28	18	---
TOTAL	322.3	233.1	284.4	285.9	229.5	288.3	601	3760	7512	1497	669	494
MEAN	10.4	7.77	9.17	9.22	8.20	9.30	20.0	121	250	48.3	21.6	16.5
MAX	15	9.0	10	10	9.6	14	28	308	454	90	28	18
MIN	7.9	7.2	8.4	8.0	7.8	7.7	13	25	95	28	18	15
AC-FT	639	462	564	567	455	572	1190	7460	14900	2970	1330	980

CAL YR 1977 TOTAL 5056.5 MEAN 13.9 MAX 53 MIN 5.0 AC-FT 10030
WTR YR 1978 TOTAL 16176.5 MEAN 44.3 MAX 454 MIN 7.2 AC-FT 32090

09040000 EAST FORK TROUBLESOME CREEK NEAR TROUBLESOME, CO

LOCATION.--Lat 40°09'27", long 106°16'58", in NW¼ sec.7, T.2 N., R.79 W., Grand County, Hydrologic Unit 14010001, on right bank 400 ft (120 m) upstream from mouth and 6.5 mi (10.5 km) north of Troublesome.

DRAINAGE AREA.--76.0 mi² (196.8 km²).

PERIOD OF RECORD.--April 1937 to September 1943, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,670 ft (2,338 m), from topographic map. See WSP 1733 for history of changes prior to Oct. 1, 1953. Oct. 1, 1953, to July 21, 1966, at site 100 ft (30 m) downstream at present datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years, 28.2 ft³/s (0.799 m³/s), 20,430 acre-ft/yr (25.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 795 ft³/s (22.5 m³/s) May 25, 1978, gage height, 5.66 ft (1.725 m); minimum daily, 0.20 ft³/s (0.006 m³/s) Oct. 3, 1941, Sept. 2, 3, 26, 27, 1942.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.8 m³/s), and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 16	2400	581	16.5	5.35	1.631	May 25	0300	*795	22.5	5.65	1.725

Minimum daily discharge, 2.5 ft³/s (0.071 m³/s) Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	4.5	4.7	3.8	4.3	4.3	30	82	427	68	9.5	4.7
2	2.9	3.6	4.7	3.9	4.3	4.3	28	81	404	58	8.1	4.5
3	2.5	3.9	4.7	3.8	4.3	4.1	31	96	366	52	8.1	4.0
4	2.5	3.8	4.8	3.8	4.3	3.8	27	102	365	47	7.7	3.8
5	3.7	3.7	4.7	3.8	4.3	4.3	29	97	353	43	7.5	3.4
6	9.1	3.6	4.7	3.8	4.6	4.1	28	87	327	40	7.0	3.3
7	12	3.0	4.6	3.8	4.6	4.1	36	78	337	37	8.5	3.3
8	9.6	3.0	4.7	3.8	4.6	4.1	52	70	327	33	7.8	3.3
9	6.1	3.4	4.7	3.8	4.6	4.1	59	66	327	31	9.0	3.3
10	5.5	3.4	4.7	3.8	4.6	4.8	48	75	406	32	7.8	3.3
11	4.4	3.2	4.7	3.8	4.3	4.6	42	82	449	32	6.9	4.1
12	4.1	3.2	4.7	3.8	4.6	5.7	48	94	373	37	5.4	4.9
13	3.8	3.1	4.7	3.8	4.6	5.7	50	110	352	29	3.0	4.5
14	3.8	3.0	4.7	3.9	4.5	5.5	53	159	338	25	4.9	4.4
15	3.7	3.0	4.9	4.0	4.5	5.5	56	255	292	24	10	4.1
16	3.6	3.3	4.8	4.3	4.0	5.4	61	409	263	28	8.4	3.9
17	3.7	3.6	5.3	4.1	4.0	5.5	69	530	225	33	3.3	4.2
18	3.6	3.4	5.2	4.6	4.0	5.6	60	335	191	26	3.6	5.5
19	3.5	3.5	4.9	4.8	4.0	5.8	53	253	169	22	4.0	7.4
20	3.5	3.6	4.7	4.8	4.0	6.0	55	236	152	21	4.1	9.2
21	4.1	3.8	4.0	4.8	4.0	5.8	65	289	135	20	4.1	8.5
22	5.0	4.0	4.0	4.8	4.0	6.2	66	485	125	17	4.1	7.8
23	4.7	4.4	4.0	4.8	4.0	5.9	62	525	117	16	4.0	7.7
24	4.2	4.6	4.0	4.5	4.0	5.9	60	566	111	14	3.9	7.3
25	4.1	4.9	4.0	4.5	4.0	5.4	71	623	101	13	3.5	6.7
26	3.9	4.9	4.0	4.5	4.0	6.6	85	572	93	12	3.5	6.3
27	3.7	5.1	4.0	4.5	4.0	6.6	103	548	84	12	3.4	5.6
28	3.6	4.8	4.0	4.3	4.0	7.3	96	501	77	11	3.3	5.2
29	3.6	4.8	4.0	4.3	---	9.1	90	432	74	11	4.2	5.1
30	4.5	4.7	4.0	4.3	---	12	89	438	75	13	5.5	4.9
31	5.2	---	4.0	4.3	---	21	---	506	---	12	5.0	---
TOTAL	140.9	114.8	139.6	129.6	119.0	189.1	1702	8782	7435	869	179.1	154.2
MEAN	4.55	3.83	4.50	4.18	4.25	6.10	56.7	283	248	28.0	5.78	5.14
MAX	12	5.1	5.3	4.8	4.6	21	103	623	449	68	10	9.2
MIN	2.5	3.0	4.0	3.8	4.0	3.8	27	66	74	11	3.0	3.3
AC-FT	279	228	277	257	236	375	3380	17420	14750	1720	355	306

CAL YR 1977 TOTAL 3225.45 MEAN 8.84 MAX 56 MIN .90 AC-FT 6400
WTR YR 1978 TOTAL 19954.30 MEAN 54.7 MAX 623 MIN 2.5 AC-FT 39580

09041900 MONTE CRISTO DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'15", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1,800 ft (550 m) downstream from diversion point, 1.4 mi (2.3 km) northwest of Hoosier Pass, and 7 mi (11 km) southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 10,986 ft (3,348.5 m), from topographic map.

REMARKS.--Records good except those for Sept. 1-27 which are poor. This is a transmountain diversion from Monte Cristo Creek in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion point is in SW¼NE¼ sec.2, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 70 ft³/s (1.98 m³/s) June 20, 1965; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	1.4	5.9	7.5	15	7.4
2	.00	.00	.00	.00	.00	.00	.00	1.3	5.7	5.9	14	30
3	.00	.00	.00	.00	.00	.00	.00	1.2	7.9	6.5	13	38
4	.00	.00	.00	.00	.00	.00	.00	1.2	7.1	5.9	12	38
5	.00	.00	.00	.00	.00	.00	.00	1.2	5.7	5.3	9.8	38
6	.00	.00	.00	.00	.00	.00	.00	1.2	5.4	3.6	9.3	39
7	.00	.00	.00	.00	.00	.00	.00	1.2	6.9	4.5	9.5	39
8	.00	.00	.00	.00	.00	.00	.00	1.1	7.3	6.3	10	39
9	.00	.00	.00	.00	.00	.00	.00	1.0	10	7.5	9.3	40
10	.00	.00	.00	.00	.00	.00	.00	1.0	14	7.5	9.1	40
11	.00	.00	.00	.00	.00	.00	.00	1.1	13	5.2	9.3	37
12	.00	.00	.00	.00	.00	.00	.00	1.2	13	2.5	9.8	34
13	.00	.00	.00	.00	.00	.00	.00	1.4	13	2.4	11	31
14	.00	.00	.00	.00	.00	.00	.00	2.6	13	2.3	12	29
15	.00	.00	.00	.00	.00	.00	.00	5.0	12	2.3	12	28
16	.00	.00	.00	.00	.00	.00	.00	7.9	11	2.2	8.3	28
17	.00	.00	.00	.00	.00	.00	.00	6.9	9.1	2.2	7.3	28
18	.00	.00	.00	.00	.00	.00	.00	4.3	8.1	2.2	6.1	28
19	.00	.00	.00	.00	.00	.00	.38	4.4	8.3	2.2	5.9	42
20	.00	.00	.00	.00	.00	.00	.48	4.9	8.9	9.7	5.0	42
21	.00	.00	.00	.00	.00	.00	.54	4.8	8.5	18	5.2	38
22	.00	.00	.00	.00	.00	.00	.54	5.5	8.9	21	10	34
23	.00	.00	.00	.00	.00	.00	.48	8.1	9.5	20	29	32
24	.00	.00	.00	.00	.00	.00	.54	8.3	9.1	20	30	28
25	.00	.00	.00	.00	.00	.00	1.2	7.1	8.9	19	30	26
26	.00	.00	.00	.00	.00	.00	1.7	6.1	7.9	17	30	23
27	.00	.00	.00	.00	.00	.00	1.8	5.2	7.3	18	31	16
28	.00	.00	.00	.00	.00	.00	1.6	4.2	6.9	18	30	.00
29	.00	.00	.00	.00	---	.00	1.5	4.2	7.1	16	.00	.00
30	.00	.00	.00	.00	---	.00	1.5	5.4	8.1	16	.00	.00
31	.00	---	.00	.00	---	.00	---	6.1	---	16	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	12.26	116.5	267.5	294.0	396.40	872.40
MEAN	.000	.000	.000	.000	.000	.000	.41	3.76	8.92	9.48	12.8	29.1
MAX	.00	.00	.00	.00	.00	.00	1.8	8.3	14	21	31	42
MIN	.00	.00	.00	.00	.00	.00	.00	1.0	5.4	2.2	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	24	231	531	583	786	1730

CAL YR 1977 TOTAL 439.77 MEAN 1.20 MAX 30 MIN .00 AC-FT 872
WTR YR 1978 TOTAL 1959.06 MEAN 5.37 MAX 42 MIN .00 AC-FT 3890

09044300 BEMROSE-HOOSIER DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'50", long 106°04'13", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank at entrance to Hoosier Pass tunnel, 1.4 mi (2.3 km) northwest of Hoosier Pass, 1.6 mi (2.6 km) downstream from diversion point on Bemrose Creek, and 7 mi (11 km) southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 10,986 ft (3,348.5 m), from topographic map.

REMARKS.--Records good. This is a transmountain diversion from Bemrose and Hoosier Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in SW¼SW¼ sec.6, T.8 S., R.77 W., and in sec.12, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 44 ft³/s (1.25 m³/s) June 21, 1965; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.96	7.4	16	4.0	.00
2	.00	.00	.00	.00	.00	.00	.00	.96	7.8	15	4.0	.00
3	.00	.00	.00	.00	.00	.00	.00	.96	10	14	3.8	.00
4	.00	.00	.00	.00	.00	.00	.00	.96	9.3	13	3.7	.00
5	.00	.00	.00	.00	.00	.00	.00	.96	8.0	12	3.3	.00
6	.00	.00	.00	.00	.00	.00	.00	.96	8.6	11	3.3	.00
7	.00	.00	.00	.00	.00	.00	.00	.87	8.9	11	3.2	.00
8	.00	.00	.00	.00	.00	.00	.00	.87	9.7	10	3.0	.00
9	.00	.00	.00	.00	.00	.00	.00	.78	14	10	3.0	.00
10	.00	.00	.00	.00	.00	.00	.00	.96	20	10	2.9	.00
11	.00	.00	.00	.00	.00	.00	.00	1.2	23	10	2.7	.00
12	.00	.00	.00	.00	.00	.00	.00	1.1	25	10	3.0	.00
13	.00	.00	.00	.00	.00	.00	.00	1.3	28	9.1	3.3	.00
14	.00	.00	.00	.00	.00	.00	.69	2.1	28	8.6	2.9	.00
15	.00	.00	.00	.00	.00	.00	.54	3.2	30	8.0	2.7	.00
16	.00	.00	.00	.00	.00	.00	.54	4.1	29	7.8	2.5	.00
17	.00	.00	.00	.00	.00	.00	.54	3.8	25	7.6	2.2	.00
18	.00	.00	.00	.00	.00	.00	.54	2.7	23	7.2	2.1	.00
19	.00	.00	.00	.00	.00	.00	.54	3.5	24	6.7	2.1	.00
20	.00	.00	.00	.00	.00	.00	.54	4.1	23	6.5	2.0	.00
21	.00	.00	.00	.00	.00	.00	.60	3.8	22	6.3	2.0	.00
22	.00	.00	.00	.00	.00	.00	.60	4.8	23	5.7	2.0	.00
23	.00	.00	.00	.00	.00	.00	.60	6.3	23	5.4	1.9	.00
24	.00	.00	.00	.00	.00	.00	.69	6.7	22	5.2	1.9	.00
25	.00	.00	.00	.00	.00	.00	.78	6.1	21	4.8	1.9	.00
26	.00	.00	.00	.00	.00	.00	1.1	6.1	20	4.7	1.7	.00
27	.00	.00	.00	.00	.00	.00	1.1	5.0	18	4.5	1.6	.00
28	.00	.00	.00	.00	.00	.00	.96	4.3	17	4.3	1.3	.00
29	.00	.00	.00	.00	---	.00	1.2	5.6	17	4.3	.00	.00
30	.00	.00	.00	.00	---	.00	1.0	7.4	18	4.3	.00	.00
31	.00	---	.00	.00	---	.00	---	7.6	---	4.1	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	12.56	100.04	562.7	257.1	74.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.42	3.23	18.8	8.29	2.39	.000
MAX	.00	.00	.00	.00	.00	.00	1.2	7.6	30	16	4.0	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.78	7.4	4.1	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	25	198	1120	510	147	.00

CAL YR 1977 TOTAL 230.05 MEAN .63 MAX 7.4 MIN .00 AC-FT 456
WTR YR 1978 TOTAL 1006.40 MEAN 2.76 MAX 30 MIN .00 AC-FT 2000

09044800 MCCULLOUGH-SPRUCE-CRYSTAL DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'14", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1.4 mi (2.3 km) northwest of Hoosier Pass, 1.6 mi (2.6 km) downstream from diversion point on McCullough Gulch, and 7 mi (11 km) southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1961, published as McCullough diversion near Hoosier Pass.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 10,986 ft (3,348.5 m), from topographic map.

REMARKS.--Records good. This is a transmountain diversion from McCullough Gulch and Spruce and Crystal Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in secs.14, 23, and 26, T.7 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 123 ft³/s (3.48 m³/s) June 20, 1968; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.72	14	1.6	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.72	14	1.4	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.61	16	1.4	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.72	13	1.3	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.72	11	1.0	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.61	10	1.0	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.61	15	1.2	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.61	19	1.2	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.61	30	1.0	5.7	.00
10	.00	.00	.00	.00	.00	.00	.00	.72	48	1.0	8.3	.00
11	.00	.00	.00	.00	.00	.00	.00	.94	52	.45	10	.00
12	.00	.00	.00	.00	.00	.00	.00	.83	50	.00	12	.00
13	.00	.00	.00	.00	.00	.00	.00	.94	88	.00	15	.00
14	.00	.00	.00	.00	.00	.00	.00	2.0	111	.00	15	.00
15	.00	.00	.00	.00	.00	.00	.00	3.4	111	.00	14	.00
16	.00	.00	.00	.00	.00	.00	.00	6.3	101	.00	10	.00
17	.00	.00	.00	.00	.00	.00	.00	8.3	79	.00	8.8	.00
18	.00	.00	.00	.00	.00	.00	.00	4.4	68	.00	8.3	.00
19	.00	.00	.00	.00	.00	.00	.00	4.5	74	.00	7.0	.00
20	.00	.00	.00	.00	.00	.00	.38	6.7	77	.00	6.3	.00
21	.00	.00	.00	.00	.00	.00	.72	6.3	80	.00	6.3	.00
22	.00	.00	.00	.00	.00	.00	.72	6.1	100	6.6	8.1	.00
23	.00	.00	.00	.00	.00	.00	.72	10	116	17	8.5	.00
24	.00	.00	.00	.00	.00	.00	.72	12	115	10	8.3	.00
25	.00	.00	.00	.00	.00	.00	.83	13	112	.00	8.1	.00
26	.00	.00	.00	.00	.00	.00	.83	12	90	.00	7.8	.00
27	.00	.00	.00	.00	.00	.00	1.0	10	41	.00	7.5	.00
28	.00	.00	.00	.00	.00	.00	.83	6.1	5.2	.00	7.2	.00
29	.00	.00	.00	.00	---	.00	.72	5.6	3.6	.00	2.5	.00
30	.00	.00	.00	.00	---	.00	.83	10	1.9	.00	1.2	.00
31	.00	---	.00	.00	---	.00	---	13	---	.00	.20	---
TOTAL	.00	.00	.00	.00	.00	.00	8.30	149.06	1665.7	46.15	186.10	.00
MEAN	.000	.000	.000	.000	.000	.000	.28	4.81	55.5	1.49	6.00	.000
MAX	.00	.00	.00	.00	.00	.00	1.0	13	116	17	15	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.61	1.9	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	16	296	3300	92	369	.00

CAL YR 1977 TOTAL 622.00 MEAN 1.70 MAX 52 MIN .00 AC-FT 1230
WTR YR 1978 TOTAL 2055.31 MEAN 5.63 MAX 116 MIN .00 AC-FT 4080

09046600 BLUE RIVER NEAR DILLON, CO

LOCATION.--Lat 39°32'55", long 106°02'19", in NW¼NE¼ sec.7, T.6 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.2 mi (0.3 km) downstream from Swan River and 5.5 mi (8.8 km) south of Dillon.

DRAINAGE AREA.--119 mi² (308 km²).

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 9,120 ft (2,780 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Transmountain diversions above station by Boreas Pass ditch and Hoosier Pass tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 97.0 ft³/s (2.747 m³/s), 70,280 acre-ft/yr (86.7 hm³/yr), including diversion to Hoosier Pass tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s (35.4 m³/s) June 17, 1965, gage height, 5.38 ft (1.640 m), from rating curve extended above 610 ft³/s (17 m³/s); minimum daily, 17 ft³/s (0.48 m³/s) Mar. 21, 1961, Feb. 24-26, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 698 ft³/s (19.8 m³/s) at 1300 June 16, gage height, 4.60 ft (1.402 m); minimum daily, 17 ft³/s (0.48 m³/s) Feb. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	26	22	20	19	18	24	63	267	515	140	51
2	35	26	22	20	19	18	25	65	288	469	136	53
3	34	26	22	20	18	18	25	61	306	435	131	54
4	33	26	23	20	18	18	26	63	338	408	122	55
5	32	26	23	20	18	18	26	62	331	376	117	55
6	32	25	22	20	18	18	27	60	313	359	112	53
7	32	25	22	20	18	18	28	56	331	353	107	52
8	33	25	22	20	18	18	29	55	333	333	104	50
9	32	25	22	20	18	18	32	54	350	326	102	49
10	34	25	22	20	18	18	31	57	473	326	99	49
11	34	25	22	20	18	18	31	63	575	320	94	48
12	32	24	22	20	18	18	33	77	580	319	89	48
13	32	24	22	20	18	18	34	88	597	325	85	48
14	32	24	22	20	18	18	35	107	640	300	85	47
15	31	24	22	20	18	18	35	133	657	275	84	47
16	30	23	22	20	18	18	39	174	682	262	82	46
17	30	23	22	20	18	18	38	233	658	260	79	45
18	30	23	22	20	18	18	37	240	593	262	74	44
19	30	23	22	20	18	19	38	214	580	250	70	44
20	29	23	22	20	18	19	39	205	560	237	67	44
21	29	23	22	20	18	19	40	216	580	224	65	44
22	28	23	21	19	18	19	40	223	560	208	63	45
23	28	22	21	19	18	19	40	227	518	189	62	47
24	28	22	21	19	17	20	42	246	518	167	61	47
25	29	22	21	19	17	20	49	270	522	152	59	46
26	28	22	21	19	17	20	55	267	504	150	57	45
27	28	22	21	19	18	20	59	260	464	151	57	45
28	28	22	21	19	18	20	64	254	474	147	54	45
29	27	22	21	19	---	21	68	235	490	147	53	44
30	27	22	20	19	---	22	65	232	508	148	51	45
31	27	---	21	19	---	23	---	247	---	145	51	---
TOTAL	950	713	673	610	503	585	1154	4807	14590	8538	2612	1435
MEAN	30.6	23.8	21.7	19.7	18.0	18.9	38.5	155	486	275	84.3	47.8
MAX	36	26	23	20	19	23	68	270	682	515	140	55
MIN	27	22	20	19	17	18	24	54	267	145	51	44
AC-FT	1880	1410	1330	1210	998	1160	2290	9530	28940	16940	5180	2850

CAL YR 1977 TOTAL 18624 MEAN 51.0 MAX 233 MIN 19 AC-FT 36940
WTR YR 1978 TOTAL 37170 MEAN 102 MAX 682 MIN 17 AC-FT 73730

09047500 SNAKE RIVER NEAR MONTEZUMA, CO

LOCATION.--Lat 39°36'20", long 105°56'33", in NW¼ sec.19, T.5 S., R.76 W. (projected), Summit County, Hydrologic Unit 14010002, on right bank 200 ft (61 m) downstream from North Fork and 4.5 mi (7.2 km) northwest of Montezuma.

DRAINAGE AREA.--57.7 mi^2 (149 km^2).

PERIOD OF RECORD.--July 1942 to September 1946, October 1951 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 9,320 ft (2,841 m), from topographic map. Prior to Oct. 14, 1943, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Small diversions above station for irrigation and domestic use. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years, 59.7 ft^3/s (1.691 m^3/s), 43,250 acre-ft/yr (53.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft^3/s (35.4 m^3/s) June 10, 1952, gage height, 3.51 ft (1.070 m); maximum gage height, 3.88 ft (1.183 m) June 6, 1972; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 680 ft^3/s (19.3 m^3/s) at 2000 June 15, gage height, 3.78 ft (1.152 m), only peak base of 500 ft^3/s (14 m^3/s); minimum daily, 6.6 ft^3/s (0.19 m^3/s) Feb. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	11	9.0	9.0	6.8	10	17	130	359	95	35
2	17	14	10	9.0	9.0	7.0	10	16	140	329	91	33
3	17	14	10	9.0	9.0	7.0	11	16	150	310	83	34
4	17	13	11	9.0	8.2	7.0	11	16	160	289	78	32
5	18	13	11	9.0	8.0	7.0	12	15	150	273	71	32
6	18	13	10	9.0	8.0	7.0	12	18	149	253	68	30
7	21	13	10	9.0	8.0	7.0	14	17	171	240	68	30
8	19	13	10	9.0	8.0	7.0	17	17	172	238	66	30
9	18	13	10	9.0	8.0	7.0	16	19	240	234	64	29
10	18	12	10	9.0	8.0	7.0	15	21	364	221	63	29
11	19	12	10	9.0	8.0	7.0	14	20	445	213	60	29
12	24	12	10	9.0	7.8	7.0	14	19	470	206	59	29
13	18	12	10	9.0	7.6	7.0	15	21	499	194	65	27
14	18	12	10	9.0	7.4	7.0	12	33	531	186	61	27
15	18	12	10	9.0	7.2	7.0	13	49	564	176	63	26
16	17	12	10	9.0	7.0	7.0	15	66	559	167	55	25
17	17	12	10	9.0	7.0	7.2	15	70	514	169	50	28
18	17	12	10	9.0	7.0	7.8	15	60	471	163	49	26
19	17	12	10	9.0	7.0	8.0	15	56	462	154	48	27
20	16	12	10	9.0	7.0	8.0	15	67	451	150	46	28
21	17	12	10	9.0	7.0	8.0	15	74	463	144	45	27
22	18	12	10	9.0	7.0	9.0	15	78	485	135	45	27
23	17	12	9.4	9.0	7.0	9.0	14	96	495	128	43	26
24	16	12	9.4	9.0	7.0	9.0	14	117	489	122	42	25
25	16	12	9.4	9.0	6.8	9.0	15	125	484	114	41	24
26	16	12	9.4	9.0	6.6	9.4	18	124	436	109	39	24
27	15	12	9.4	9.0	6.6	9.8	22	119	408	106	37	23
28	15	12	9.4	9.0	6.6	10	19	117	385	104	36	23
29	15	12	9.4	9.0	---	10	18	115	387	106	36	22
30	15	12	9.4	9.0	---	10	18	113	411	112	35	21
31	14	---	8.8	9.0	---	10	---	120	---	96	34	---
TOTAL	535	372	307.0	279.0	210.8	246.0	439	1831	11235	5800	1736	828
MEAN	17.3	12.4	9.90	9.00	7.53	7.94	14.6	59.1	375	187	56.0	27.6
MAX	24	14	11	9.0	9.0	10	22	125	564	359	95	35
MIN	14	12	8.8	9.0	6.6	6.8	10	15	130	96	34	21
AC-FT	1060	738	609	553	418	488	871	3630	22280	11500	3440	1640

CAL YR 1977 TOTAL 12226.0 MEAN 33.5 MAX 243 MIN 8.8 AC-FT 24250
WTR YR 1978 TOTAL 23818.8 MEAN 65.3 MAX 564 MIN 6.6 AC-FT 47240

NOTE.--NO GAGE-HEIGHT RECORD DEC. 11 TO APR. 5.

09047700 KEYSTONE GULCH NEAR DILLON, CO

LOCATION.--Lat 39°35'40", long 105°58'19", in NE¼NE¼ sec.26, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.7 mi (1.1 km) upstream from mouth and 4.7 mi (7.6 km) southeast of Dillon.

DRAINAGE AREA.--9.10 mi^2 (23.6 km^2).

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 9,350 ft (2,850 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No known diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 5.52 ft^3/s (0.156 m^3/s), 4,000 acre-ft/yr (4.93 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90 ft^3/s (2.55 m^3/s) June 5, 1958, gage height, 2.75 ft (0.838 m), from rating curve extended above 28 ft^3/s (0.80 m^3/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft^3/s (2.15 m^3/s) at 1900 June 15, gage height, 2.67 ft (0.814 m), only peak above base of 35 ft^3/s (0.99 m^3/s); minimum daily, 1.6 ft^3/s (0.045 m^3/s) Nov. 15-27, Jan. 26-Mar.3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.1	1.7	1.7	1.6	1.6	2.4	3.0	22	21	4.9	4.4
2	1.9	2.4	1.7	1.7	1.6	1.6	2.0	3.0	23	20	4.7	4.3
3	1.9	2.4	1.7	1.7	1.6	1.6	1.9	3.1	24	18	4.7	4.1
4	1.9	2.4	1.7	1.7	1.6	1.7	2.0	3.0	24	16	4.8	4.0
5	2.0	2.3	1.7	1.7	1.6	1.7	2.1	3.0	24	15	4.9	4.0
6	2.1	2.2	1.7	1.7	1.6	1.7	2.4	3.2	27	14	4.9	3.9
7	2.3	2.2	1.7	1.7	1.6	1.7	2.2	3.6	27	12	4.9	3.9
8	2.2	2.2	1.7	1.7	1.6	1.7	2.4	3.2	28	12	4.9	3.9
9	2.1	2.0	1.7	1.7	1.6	1.7	2.4	4.4	34	11	4.8	3.9
10	2.2	1.9	1.7	1.7	1.6	1.7	2.7	3.9	43	11	5.0	3.8
11	2.3	1.9	1.7	1.7	1.6	1.7	2.6	3.5	39	10	4.9	3.8
12	3.0	1.8	1.8	1.7	1.6	1.7	2.3	3.3	45	8.9	4.9	3.8
13	2.8	1.7	1.8	1.7	1.6	1.7	2.3	4.3	50	7.4	5.1	3.6
14	2.6	1.7	1.8	1.7	1.6	1.7	2.2	6.2	58	8.5	5.0	3.6
15	2.5	1.6	1.8	1.7	1.6	1.7	2.2	8.6	62	8.0	5.2	3.6
16	2.4	1.6	1.8	1.7	1.6	1.7	2.3	11	55	7.7	5.1	3.5
17	2.3	1.6	1.8	1.7	1.6	1.7	2.4	11	56	7.6	4.8	3.7
18	2.3	1.6	1.8	1.7	1.6	1.7	2.5	8.8	52	7.1	4.9	3.6
19	2.3	1.6	1.8	1.7	1.6	1.7	2.5	8.7	49	6.9	4.9	3.6
20	2.3	1.6	1.8	1.7	1.6	1.7	2.8	11	46	6.7	4.7	3.7
21	2.5	1.6	1.8	1.7	1.6	1.7	2.6	12	43	6.6	4.7	3.6
22	2.4	1.6	1.8	1.7	1.6	1.7	3.1	13	41	6.2	5.0	3.6
23	2.2	1.6	1.8	1.7	1.6	1.7	2.8	16	37	5.8	4.9	3.4
24	2.1	1.6	1.8	1.7	1.6	1.7	2.6	20	34	5.6	4.8	3.2
25	2.1	1.6	1.8	1.7	1.6	1.7	2.7	21	31	5.4	4.7	3.2
26	2.1	1.6	1.8	1.6	1.6	1.7	3.0	21	28	5.3	4.7	3.2
27	2.2	1.6	1.8	1.6	1.6	1.7	3.1	20	25	5.0	4.5	3.2
28	2.1	1.7	1.8	1.6	1.6	1.7	3.1	18	23	5.0	4.5	3.2
29	2.1	1.7	1.8	1.6	---	1.8	3.1	18	23	5.0	4.4	3.2
30	2.2	1.7	1.8	1.6	---	1.8	3.0	20	26	5.4	4.3	3.0
31	2.1	---	1.8	1.6	---	2.0	---	21	---	4.9	4.3	---
TOTAL	69.4	55.1	54.7	52.1	44.8	52.9	75.7	309.8	1099	289.0	148.8	109.5
MEAN	2.24	1.84	1.76	1.68	1.60	1.71	2.52	9.99	36.6	9.32	4.80	3.65
MAX	3.0	2.4	1.8	1.7	1.6	2.0	3.1	21	62	21	5.2	4.4
MIN	1.9	1.6	1.7	1.6	1.6	1.6	1.9	3.0	22	4.9	4.3	3.0
AC-FT	138	109	108	103	89	105	150	614	2180	573	295	217

CAL YR 1977 TOTAL 1164.7 MEAN 3.19 MAX 12 MIN 1.6 AC-FT 2310
WTR YR 1978 TOTAL 2360.8 MEAN 6.47 MAX 62 MIN 1.6 AC-FT 4680

NOTE.--NO GAGE-HEIGHT RECORD DEC. 13 TO APR. 5.

09049200 WEST TENMILE CREEK AT COPPER MOUNTAIN, CO

LOCATION.--Lat 39°30'01", long 106°09'56", in NE¼ sec.25, T.6 S., R.79 W., Summit County, Hydrologic Unit 14010002, on left bank 200 ft (61 m) upstream from Union Gulch, 0.8 mi (1.3 km) west of Copper Mountain, and 6.3 mi (10.1 km) southwest of Frisco.

DRAINAGE AREA.--21 mi² (54 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year. Prior to October 1975, published as West Tenmile Creek at Wheeler Junction.

GAGE.--Water-stage recorder and automatic sediment sampler. Altitude of gage is 9,835 ft (2,998 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--5 years, 28.7 ft³/s (0.813 m³/s), 20,790 acre-ft/yr (25.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 669 ft³/s (18.9 m³/s) June 15, 1978, gage height, 3.31 ft (1.009 m); minimum daily, 2.1 ft³/s (0.059 m³/s) Feb. 23, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 669 ft³/s (12.9 m³/s) at 1930 June 15, gage height, 3.31 ft (1.009 m); only peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) Nov. 12 to Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	5.7	2.5	3.5	3.5	3.5	8.0	15	176	174	29	11
2	6.3	5.7	2.5	3.5	3.5	3.5	9.4	15	197	154	27	9.9
3	6.0	5.7	2.5	3.5	3.5	3.5	10	16	209	141	25	10
4	5.7	5.7	3.0	3.5	3.5	3.5	8.9	18	220	125	24	9.6
5	6.3	5.7	3.5	3.5	3.5	3.5	9.4	17	159	110	22	9.3
6	7.5	5.5	3.5	3.5	3.5	3.5	8.3	14	164	96	21	8.9
7	9.5	5.0	3.5	3.5	3.5	3.5	8.5	16	200	89	20	9.1
8	9.1	4.5	3.5	3.5	3.5	3.5	9.0	12	181	83	20	9.2
9	9.0	4.0	3.5	3.5	3.5	3.5	9.0	19	242	85	19	8.9
10	8.1	3.5	3.5	3.5	3.5	3.5	8.6	18	359	86	18	9.2
11	10	3.0	3.5	3.5	3.5	3.5	6.3	22	418	80	18	9.9
12	16	2.5	3.5	3.5	3.5	3.5	9.0	20	364	74	19	9.4
13	15	2.5	3.5	3.5	3.5	3.5	7.4	22	391	66	20	9.1
14	10	2.5	3.5	3.5	3.5	3.5	9.1	37	384	60	21	9.1
15	8.4	2.5	3.5	3.5	3.5	3.5	10	61	406	57	21	8.8
16	7.4	2.5	3.5	4.0	3.5	3.5	16	94	383	56	17	8.9
17	7.1	2.5	3.5	4.0	3.5	3.5	11	104	317	61	15	9.6
18	7.1	2.5	3.5	4.0	3.5	3.5	10	63	286	52	14	9.5
19	6.6	2.5	3.5	4.0	3.5	3.5	10	65	292	49	14	10
20	6.6	2.5	3.5	4.0	3.5	3.5	10	87	286	49	13	12
21	6.3	2.5	3.5	4.0	3.5	3.5	10	95	306	46	13	13
22	6.2	2.5	3.5	4.0	3.5	3.5	10	96	338	41	13	12
23	6.3	2.5	3.5	4.0	3.5	3.7	10	125	323	38	13	11
24	7.0	2.5	3.5	4.0	3.5	3.7	11	159	318	36	12	10
25	6.8	2.5	3.5	4.0	3.5	3.8	14	164	297	34	13	10
26	6.7	2.5	3.5	3.5	3.5	3.9	21	149	239	33	12	9.7
27	6.4	2.5	3.5	3.5	3.5	4.3	25	147	208	31	11	9.4
28	6.2	2.5	3.5	3.5	3.5	4.6	22	119	197	31	10	9.4
29	6.0	2.5	3.5	3.5	---	4.9	17	107	192	31	10	9.0
30	5.6	2.5	3.5	3.5	---	5.9	17	154	199	31	10	8.7
31	5.5	---	3.5	3.5	---	7.3	---	169	---	30	10	---
TOTAL	237.2	101.5	105.0	113.5	98.0	119.1	344.9	2219	8261	2129	524	293.6
MEAN	7.65	3.38	3.39	3.66	3.50	3.84	11.5	71.6	275	68.7	16.9	9.79
MAX	16	5.7	3.5	4.0	3.5	7.3	25	169	418	174	29	13
MIN	5.5	2.5	2.5	3.5	3.5	3.5	6.3	12	159	30	10	8.7
AC-FT	470	201	208	225	194	236	684	4400	16390	4220	1040	582

CAL YR 1977 TOTAL 6901.8 MEAN 18.9 MAX 187 MIN 2.5 AC-FT 13690
WTR YR 1978 TOTAL 14545.8 MEAN 39.9 MAX 418 MIN 2.5 AC-FT 28850

NOTE.--NO GAGE-HEIGHT RECORD NOV. 13 TO MAR. 21.

09049200 WEST TENMILE CREEK AT COPPER MOUNTAIN, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1973 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to current year.

INSTRUMENTATION.--Pumping sediment sampler since October 1973.

REMARKS.--Daily sediment records not available at time of publication. Will be published with 1979 records.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 2,000 mg/L May 29, 1974; minimum daily, 1 mg/L May 1, 1974, several days during March 1976, many days during 1977.
SEDIMENT LOADS: Maximum daily, 1,620 tons (1,470 t) May 29, 1974; minimum daily, 0.01 ton (0.01 t) several days during March 1976 and many days during winter months in 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
NOV												
10...	0845	E3.5	180	7.5	1.0	110	38	3.4	2.1	117	--	--
11...	1400	14	160	8.0	1.0	--	--	--	--	--	--	--
FEB												
21...	1300	E3.5	200	8.3	.0	100	35	3.3	2.1	108	.17	.01
MAR												
14...	1130	E3.5	220	7.0	.0	100	36	3.5	4.4	104	.15	.01
APR												
12...	1130	E5.9	220	8.1	2.5	97	33	3.6	10	115	.28	.00
16...	1230	E5.9	200	7.6	4.5	100	35	3.4	9.9	108	.22	.00
28...	1400	E14	185	7.5	3.0	140	50	3.2	5.7	98	.16	.00
MAY												
03...	1015	15	177	7.3	4.0	91	31	3.3	5.7	102	.09	.00
08...	1000	E12	200	7.8	2.0	95	33	3.0	5.5	100	.08	.00
17...	1200	E87	137	7.8	2.0	53	18	1.9	4.6	84	.10	.00
17...	1300	12	134	7.9	2.0	68	23	2.6	3.2	77	.34	.00
23...	1100	104	102	8.3	5.0	53	18	1.9	1.5	64	.02	.00
31...	1515	195	87	7.9	4.0	47	16	1.6	1.1	60	.04	.00
JUN												
05...	1015	136	88	8.0	5.0	43	15	1.4	3.8	59	.01	.00
14...	1600	302	67	7.8	5.0	62	23	1.1	.5	48	.04	.01
22...	1600	236	75	7.8	10.0	37	13	1.1	.6	42	.02	.01
28...	1200	157	90	7.8	10.0	56	20	1.4	.8	48	.01	.01
JUL												
05...	1200	157	85	8.2	8.0	--	--	--	--	--	--	--
13...	1005	67	100	7.8	9.0	--	--	--	--	--	--	--
19...	1005	43	80	--	8.0	--	--	--	--	--	--	--
25...	1405	30	120	7.7	15.0	60	21	1.9	.9	64	.03	.01
AUG												
09...	1200	14	90	7.7	8.0	--	--	--	--	--	--	--
25...	1330	9.4	80	--	10.0	--	--	--	--	--	--	--
SEP												
07...	1430	6.4	162	7.9	10.0	86	30	2.6	5.2	90	.00	--
12...	1205	6.4	75	--	5.0	--	--	--	--	--	--	--
26...	1000	9.0	160	8.2	6.0	88	31	2.5	2.0	93	.04	.00

E ESTIMATED.

09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO

LOCATION.--Lat 39°34'37", long 106°06'33", in SW¼NE¼ sec.34, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank 600 ft (180 m) downstream from bridge on U.S. Highway 6, 850 ft (260 m) downstream from North Tenmile Creek, and 0.6 mi (1.0 km) west of Frisco.

DRAINAGE AREA.--93.3 mi^2 (241.6 km^2).

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as "below North Fork, at Frisco."

GAGE.--Water-stage recorder. Altitude of gage is 9,090 ft (2,771 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by a few small diversions above station for irrigation and municipal use and transbasin diversion from Robinson Reservoir, capacity, 2,520 acre-ft (3.11 hm^3) in Eagle River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 92.0 ft^3/s (2.605 m^3/s), 66,650 acre-ft/yr (82.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,910 ft^3/s (54.1 m^3/s) June 16, 1965, gage height, 6.15 ft (1.875 m), from rating curve extended above 750 ft^3/s (21 m^3/s); minimum daily, 7 ft^3/s (0.20 m^3/s) Mar. 8, 14, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft^3/s (36.0 m^3/s) at 2400 June 15, gage height, 5.43 ft (1.655 m), only peak above base of 700 ft^3/s (20 m^3/s); minimum daily, 8.5 ft^3/s (0.24 m^3/s) Feb. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	9.5	11	11	9.0	20	63	418	563	116	38
2	12	11	9.5	11	10	9.0	23	63	461	522	135	35
3	12	11	11	11	10	9.0	26	63	481	504	96	33
4	12	11	11	11	10	9.0	23	63	476	478	89	31
5	14	11	12	11	10	9.0	25	62	416	451	81	31
6	16	11	12	11	10	9.0	23	59	403	420	74	33
7	17	10	12	11	10	9.0	23	58	474	392	73	32
8	15	10	12	11	10	9.0	26	54	485	377	72	32
9	13	9.5	12	11	10	9.0	25	56	607	374	68	31
10	12	9.5	12	11	10	9.0	24	61	726	380	66	29
11	15	9.5	12	11	10	9.0	29	71	793	363	64	30
12	21	9.5	12	11	10	9.0	27	75	842	355	62	30
13	18	9.5	12	11	10	9.0	25	76	905	327	65	29
14	15	9.5	12	11	10	9.0	25	109	1040	303	68	29
15	13	9.5	12	11	10	9.0	25	173	1050	280	72	28
16	12	9.5	12	11	9.5	9.0	25	259	1080	275	63	28
17	12	9.5	12	11	9.0	9.0	25	309	972	281	55	27
18	12	9.5	12	11	8.5	9.5	26	239	895	258	52	27
19	12	9.5	12	11	8.5	11	35	203	879	236	49	29
20	12	9.5	12	11	8.8	11	46	242	841	225	46	31
21	11	9.5	12	11	9.0	11	40	275	817	212	44	30
22	11	9.5	12	11	9.0	11	40	270	834	190	47	31
23	12	9.5	12	11	9.0	11	45	321	838	172	45	29
24	12	9.5	12	11	9.0	12	42	370	784	155	42	26
25	12	9.5	12	11	9.0	12	42	407	775	149	42	26
26	12	9.5	12	11	9.0	13	45	387	734	135	40	26
27	11	9.5	12	11	9.0	13	56	382	665	130	38	26
28	11	9.5	12	11	9.0	14	70	330	627	129	36	26
29	11	9.5	12	11	---	15	64	307	595	129	35	24
30	11	9.5	11	11	---	16	63	364	606	129	35	24
31	11	---	11	11	---	17	---	400	---	115	36	---
TOTAL	403	295.0	363.0	341	267.3	329.5	1033	6171	21519	9009	1876	881
MEAN	13.0	9.83	11.7	11.0	9.55	10.6	34.4	199	717	291	60.5	29.4
MAX	21	11	12	11	11	17	70	407	1080	563	116	38
MIN	11	9.5	9.5	11	8.5	9.0	20	54	403	115	35	24
AC-FT	799	585	720	676	530	654	2050	12240	42680	17870	3720	1750

CAL YR 1977 TOTAL 16299.5 MEAN 44.7 MAX 364 MIN 9.0 AC-FT 32330
WTR YR 1978 TOTAL 42487.8 MEAN 116 MAX 1080 MIN 8.5 AC-FT 84270

NOTE.--NO GAGE-HEIGHT RECORD OCT. 1 TO MAY 3.

RESERVOIRS IN BLUE RIVER BASIN

09050600 DILLON RESERVOIR.--Lat 39°37'14", long 106°03'53", in NE¼ sec.13, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, in gatehouse at dam, 0.8 mi (1.3 km) upstream from Straight Creek, about 1.3 mi (2.1 km) southwest of Dillon, and 3.5 mi (5.6 km) northeast of Frisco. DRAINAGE AREA, 335 mi² (868 km²). PERIOD OF RECORD, September 1963 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Denver Board of Water Commissioner); gage readings have been reduced to elevations NGVD.

Reservoir is earth and rockfill dam. Dam completed and storage began Sept. 3, 1963; dead storage pool filled Sept. 12, 1963. Capacity, 254,000 acre-ft (313 hm³) between elevations 8,829.00 ft (2,691.079 m), invert of outlet valve, and 9,017.00 ft (2,748.382 m), crest of spillway. Dead storage, 3,270 acre-ft (4.03 hm³). Figures given represent usable contents. Reservoir stores water for transmountain diversion to South Platte River basin through Harold D. Roberts tunnel for municipal use by city of Denver. Records furnished by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 261,300 acre-ft (322 hm³) June 25, 1971, elevation, 9,019.20 ft (2,749.052 m); minimum since appreciable storage was attained in July 1964, 45,310 acre-ft (55.9 hm³) Apr. 20, 1965, elevation, 8,904.16 ft (2,713.988 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 236,400 acre-ft (291 hm³) Aug. 1, elevation, 9,011.38 ft (2,746.669 m); minimum, 107,200 acre-ft (132 hm³) Apr. 29, elevation, 8,952.73 ft (2,728.792 m). 9,010.35 ft (2,746.355 m); minimum, 159,000 acre-ft (196 hm³) Sept. 30, elevation, 8,981.31 ft (2,737.503 m).

09057000 GREEN MOUNTAIN RESERVOIR.--Lat 39°52'42", long 106°19'45", in NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, in hoist house at right end of dam, 0.6 mi (1 km) upstream from Elliott Creek, and 13 mi (21 km) southeast of Kremmling. DRAINAGE AREA, 598 mi² (1,549 km²), includes 15.3 mi² (39.6 km²) of Elliott Creek above diversion for Elliott Creek feeder canal. PERIOD OF RECORD, November 1942 to current year. REVISED RECORDS, WSP 2124: Drainage area. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

Reservoir is formed by an earth and rockfill dam. Dam completed and storage began November 1942. Capacity, 146,900 acre-ft (181 hm³) between elevations 7,800 ft (2,377.4 m), sill of outlet gate, and 7,950 ft (2,423.2 m), top of radial spillway gates. Dead storage, 7,760 acre-ft (9.57 hm³). Figures given represent usable contents. Reservoir is used for power development and storage for replacement of water diverted to South Platte River basin. Water released to fill decrees during late irrigation season when flow of Colorado River is deficient. Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 148,900 acre-ft (184 hm³) July 10, 1947, elevation, 7,950.95 ft (2,423.450 m); minimum since appreciable storage was attained, 388 acre-ft (478,000 hm³) Jan. 12, 1963, elevation, 7,801.70 ft (2,377.958 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 146,300 acre-ft (180 hm³) July 18, elevation, 7,949.70 ft (2,423.069 m); minimum, 39,880 acre-ft (49.2 hm³) Mar. 27, elevation, 7,876.90 ft (2,400.879 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	09050600 DILLON RESERVOIR			09057000 GREEN MOUNTAIN RESERVOIR		
Sept. 30.	8,981.31	159,000	-	7,898.97	62,770	-
Oct. 31.	8,972.30	140,900	-18,100	7,895.22	58,380	-4,390
Nov. 30.	8,969.22	135,100	-5,800	7,894.68	57,760	-620
Dec. 31.	8,965.62	128,600	-6,500	7,893.38	56,300	-1,460
CAL YR 1977	-	-	-91,400	-	-	-30,640
Jan. 31.	8,961.92	122,200	-6,400	7,888.10	50,630	-5,670
Feb. 28.	8,958.46	116,400	-5,800	7,881.05	43,680	-6,950
Mar. 31.	8,954.69	110,300	-6,100	7,877.39	40,320	-3,360
Apr. 30.	8,952.76	107,200	-3,100	7,886.90	49,400	+9,080
May 31.	8,964.84	127,200	+20,000	7,903.72	68,660	+19,260
June 30.	9,004.78	217,200	+90,000	7,940.97	128,500	-59,840
July 31.	9,011.32	236,200	+19,000	7,948.44	143,600	+15,100
Aug. 31.	9,004.45	216,200	-20,000	7,945.80	138,100	-5,500
Sept. 30.	9,000.86	206,400	-9,800	7,935.27	117,600	-20,500
WTR YR 1978	-	-	+47,400	-	-	+54,830

09050700 BLUE RIVER BELOW DILLON, CO

LOCATION.--Lat 39°37'32", long 106°03'57", in SE¼SE¼ sec.12, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 0.3 mi (0.5 km) downstream from Dillon Dam, 0.1 mi (0.2 km) upstream from Straight Creek, and 1.1 mi (1.8 km) west of Dillon.

DRAINAGE AREA.--335 mi^2 (868 km^2).

PERIOD OF RECORD.--January 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,760 ft (2,670 m), from topographic map.

REMARKS.--Records good. Flow regulated since Sept. 3, 1963, by Dillon Reservoir, 0.3 mi (0.5 km) upstream (station 09050600). Natural flow of stream affected by transmountain diversions, transbasin diversions, and diversions above station for irrigation of about 400 acres (1.62 km^2) of hay meadows. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years (water years 1964-78), 189 ft^3/s (5.352 m^3/s), 136,900 acre-ft/yr (169 hm^3/yr), since completion of Dillon Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft^3/s (51.0 m^3/s) May 23, 1970, gage height, 3.63 ft (1.106 m); maximum gage height, 3.68 ft (1.122 m) June 26, 1971; no flow Sept. 4 to Nov. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 415 ft^3/s (11.8 m^3/s) at 0100 Oct. 1, gage height, 1.86 ft (0.567 m); minimum daily, 13 ft^3/s (0.37 m^3/s) Jan. 11-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	106	79	79	58	65	119	44	48	53	53	65
2	415	89	76	79	58	65	119	46	48	51	53	48
3	340	76	76	72	58	76	101	46	48	51	51	48
4	112	76	79	70	58	84	87	46	48	53	50	50
5	116	74	109	70	58	84	89	46	48	53	50	50
6	133	74	143	76	58	84	92	44	48	53	51	50
7	179	87	101	79	58	76	103	41	48	53	53	51
8	208	92	76	79	58	70	116	43	46	53	53	51
9	208	89	79	45	58	58	116	46	46	53	53	51
10	133	74	79	14	58	55	147	48	46	53	147	51
11	79	63	76	13	60	55	168	48	46	50	223	53
12	76	63	76	13	60	55	168	50	46	53	227	53
13	76	63	74	13	60	55	154	50	46	53	231	53
14	74	63	72	13	70	55	101	46	46	53	235	53
15	74	65	70	13	76	55	46	46	48	55	247	53
16	74	65	70	41	76	55	46	48	48	55	251	53
17	95	56	70	108	74	55	46	50	48	55	231	53
18	109	50	70	123	70	53	46	48	48	55	211	51
19	109	50	84	123	72	53	46	48	48	55	204	53
20	109	50	95	123	70	63	44	48	48	55	204	53
21	109	50	95	123	70	70	44	48	50	55	186	51
22	109	50	84	123	67	70	44	48	50	55	165	51
23	109	58	79	123	65	70	44	48	50	55	157	50
24	116	70	79	106	65	70	43	48	50	55	150	51
25	119	70	79	81	65	70	43	46	50	55	120	51
26	119	70	79	63	65	70	43	46	50	55	48	51
27	109	70	79	60	65	79	44	46	50	55	48	51
28	103	74	79	60	65	84	44	48	50	51	53	50
29	103	76	79	60	---	84	44	46	51	51	126	50
30	106	79	79	58	---	87	44	46	51	51	150	51
31	106	---	79	58	---	106	---	46	---	51	116	---
TOTAL	4342	2092	2544	2161	1795	2131	2391	1448	1448	1654	4207	1550
MEAN	140	69.7	82.1	69.7	64.1	68.7	79.7	46.7	48.3	53.4	136	51.7
MAX	415	106	143	123	76	106	168	50	51	55	251	65
MIN	74	50	70	13	58	53	43	41	46	50	48	48
AC-FT	8610	4150	5050	4290	3560	4230	4740	2870	2870	3280	8340	3070

CAL YR 1977 TOTAL 49462 MEAN 136 MAX 425 MIN 40 AC-FT 98110
WTR YR 1978 TOTAL 27763 MEAN 76.1 MAX 415 MIN 13 AC-FT 55070

09052000 ROCK CREEK NEAR DILLON, CO

LOCATION.--Lat 39°43'23", long 106°07'41", in NE¼ sec.9, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 500 ft (150 m) upstream from bridge on State Highway 9, 1,100 ft (340 m) upstream from mouth, 1,200 ft (370 m) downstream from confluence of North and South Rock Creeks, and 8 mi (13 km) northwest of Dillon.

DRAINAGE AREA.--15.8 mi² (40.9 km²).

PERIOD OF RECORD.--July 1942 to September 1956, October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,502.52 ft (2,591.568 m) (Colorado Highway Department datum). Prior to Apr. 21, 1943, nonrecording gage, and Apr. 21, 1943, to Sept. 13, 1950, water-stage recorder, at site 500 ft (150 m) downstream at datum 28.76 ft (8.766 m) lower.

REMARKS.--Records good except those for winter period, which are poor. A few small diversions for irrigation of hay meadows above and below station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years (water years 1943-56, 1967-78), 22.6 ft³/s (0.640 m³/s), 16,370 acre-ft/yr (20.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 289 ft³/s (8.18 m³/s) June 10, 1973, gage height, 4.35 ft (1.326 m), from rating curve extended above 154 ft³/s (4.4 m³/s); maximum gage height, 4.36 ft (1.329 m) June 24, 1971; minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Apr. 13, 17, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 251 ft³/s (7.11 m³/s) at 2300 June 10, gage height, 4.25 ft (1.298 m), only peak above base of 160 ft³/s (4.5 m³/s); minimum daily, 2.8 ft³/s (0.079 m³/s) Feb. 19-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	4.7	3.7	3.6	3.0	3.2	7.0	9.4	55	144	45	15
2	6.2	4.5	3.5	3.3	3.0	3.5	8.0	9.0	67	135	46	15
3	5.6	4.5	3.6	3.3	3.0	3.5	8.0	10	82	125	40	14
4	5.4	4.5	4.0	3.3	3.0	3.5	6.5	9.5	80	112	33	14
5	5.9	5.1	4.0	3.3	3.0	3.5	6.0	8.2	64	105	30	14
6	7.5	4.6	3.9	3.3	3.0	3.5	6.0	8.0	65	102	29	14
7	13	4.5	3.6	3.3	3.0	3.5	6.4	8.1	95	98	31	15
8	9.2	4.2	3.8	3.3	3.0	3.5	8.1	7.8	91	100	33	15
9	7.5	4.0	3.7	3.3	3.0	3.5	8.6	9.7	116	99	30	14
10	6.9	4.0	3.5	3.3	3.0	3.5	7.6	9.5	191	92	30	14
11	7.2	3.8	4.0	3.3	3.0	3.5	7.2	12	190	99	30	15
12	7.5	3.8	3.5	3.1	3.0	3.5	7.1	13	173	106	30	14
13	6.7	3.6	3.5	3.1	3.0	3.5	7.1	14	142	98	31	12
14	6.0	3.6	3.5	3.1	3.0	3.5	7.0	21	167	90	33	11
15	5.9	3.6	3.5	3.1	3.0	3.5	8.1	33	183	84	31	9.8
16	5.8	3.6	3.6	3.1	3.0	3.5	8.7	49	175	92	23	9.4
17	5.6	3.5	3.5	3.1	3.0	3.5	8.7	57	151	99	21	10
18	5.4	3.5	3.5	3.1	3.0	3.5	9.8	44	138	94	21	10
19	5.1	3.8	3.5	3.1	2.8	3.5	8.2	40	138	82	19	10
20	4.8	3.5	3.5	3.1	2.8	3.5	7.3	42	134	74	18	11
21	5.2	3.5	3.5	3.1	2.8	3.5	7.7	46	139	72	18	10
22	4.8	3.4	3.5	3.1	2.8	3.5	7.7	48	154	67	20	10
23	4.3	3.5	3.5	3.1	2.8	3.5	6.6	65	171	58	21	9.6
24	4.0	3.6	3.5	3.1	2.8	3.5	6.9	76	189	53	20	8.8
25	3.9	3.7	3.5	3.1	2.8	3.5	9.6	77	194	51	19	8.4
26	3.7	3.8	3.5	3.1	2.8	3.7	12	66	166	50	16	7.8
27	4.5	4.0	3.5	3.0	2.8	4.0	13	59	142	52	18	7.5
28	4.4	3.7	3.5	3.0	3.0	4.0	12	47	141	54	17	7.2
29	4.4	3.6	3.5	3.0	---	4.5	11	45	144	57	16	7.0
30	4.8	3.6	3.5	3.0	---	5.0	11	61	159	60	15	6.9
31	4.9	---	3.5	3.0	---	6.0	---	61	---	49	16	---
TOTAL	183.0	117.3	111.4	98.1	82.2	114.4	248.9	1065.2	4096	2653	802	339.4
MEAN	5.90	3.91	3.59	3.16	2.94	3.69	8.30	34.4	137	85.6	25.9	11.3
MAX	13	5.1	4.0	3.6	3.0	6.0	13	77	194	144	46	15
MIN	3.7	3.4	3.5	3.0	2.8	3.2	6.0	7.8	55	49	15	6.9
AC-FT	363	233	221	195	163	227	494	2110	8120	5260	1590	673

CAL YR 1977 TOTAL 4513.3 MEAN 12.4 MAX 100 MIN 2.4 AC-FT 8950
WTR YR 1978 TOTAL 9910.9 MEAN 27.2 MAX 194 MIN 2.8 AC-FT 19660

NOTE.--NO GAGE-HEIGHT RECORD JAN. 20 TO APR. 6.

09052400 BOULDER CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°43'41", long 106°10'22", in SW¼SW¼ sec.6, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank 1.2 mi (1.9 km) downstream from Boulder Lake, 3.2 mi (5.1 km) upstream from mouth, and 9.4 mi (15.1 km) northwest of Dillon.

DRAINAGE AREA.--8.56 mi² (22.2 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,460 ft (2,883 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 15.9 ft³/s (0.450 m³/s), 11,520 acre-ft/yr (14.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 254 ft³/s (7.19 m³/s) July 4, 1975, gage height, 3.27 ft (0.997 m); minimum daily, 0.80 ft³/s (0.023 m³/s) Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 209 ft³/s (5.92 m³/s) at 2300 June 24, gage height, 3.05 ft (0.930 m), only peak above base of 120 ft³/s (3.4 m³/s); minimum daily, 1.1 ft³/s (0.031 m³/s) Feb. 20-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	2.0	1.9	1.5	1.3	1.3	2.5	7.6	19	127	36	10
2	4.6	2.0	1.9	1.5	1.3	1.4	3.4	7.0	22	107	39	10
3	4.4	2.0	1.9	1.5	1.3	1.5	3.5	7.5	26	107	33	10
4	4.2	2.0	1.9	1.5	1.3	1.5	3.3	9.0	29	98	28	10
5	4.2	2.0	1.9	1.5	1.3	1.5	3.3	10	26	89	27	9.6
6	4.2	2.0	1.9	1.5	1.3	1.5	3.3	9.6	25	84	26	9.2
7	6.0	2.0	1.9	1.5	1.3	1.5	3.4	9.4	44	81	26	8.9
8	10	2.0	1.9	1.5	1.3	1.4	4.2	10	46	86	28	8.9
9	7.2	2.0	1.9	1.5	1.3	1.3	5.6	12	62	84	26	8.9
10	5.0	2.0	1.9	1.5	1.3	1.3	5.6	11	105	75	24	8.9
11	4.0	2.0	1.9	1.5	1.3	1.3	5.0	10	117	86	24	8.9
12	3.8	2.0	1.9	1.5	1.3	1.3	4.7	11	117	98	24	8.9
13	3.8	2.0	1.9	1.5	1.3	1.3	4.7	14	127	89	24	8.3
14	4.0	2.0	1.8	1.5	1.3	1.3	4.7	16	137	76	27	6.9
15	4.1	1.9	1.6	1.5	1.3	1.3	4.7	18	149	75	26	6.3
16	4.4	1.8	1.5	1.5	1.3	1.3	4.7	20	151	81	19	6.0
17	4.0	1.7	1.5	1.5	1.3	1.3	4.7	18	129	89	17	5.7
18	3.6	1.5	1.5	1.5	1.3	1.3	4.4	13	107	83	16	6.1
19	3.2	1.4	1.5	1.5	1.2	1.3	3.8	11	109	69	15	6.3
20	2.9	1.6	1.5	1.5	1.1	1.3	3.7	13	107	60	13	6.9
21	2.9	1.7	1.5	1.4	1.1	1.3	3.7	18	117	60	13	6.1
22	2.9	1.9	1.5	1.3	1.1	1.3	3.7	22	137	54	14	6.0
23	2.8	1.9	1.5	1.3	1.1	1.3	3.7	28	149	47	15	6.0
24	2.7	1.9	1.5	1.3	1.1	1.4	3.7	33	163	44	15	5.7
25	2.6	1.9	1.5	1.3	1.1	1.4	4.5	28	174	44	15	5.7
26	2.4	1.9	1.5	1.3	1.1	1.5	6.5	23	143	44	14	5.2
27	2.3	1.9	1.5	1.3	1.1	1.5	10	20	127	44	13	5.0
28	2.1	1.9	1.5	1.3	1.2	1.5	9.6	18	123	46	12	4.8
29	2.0	1.9	1.5	1.3	---	1.5	8.6	16	119	47	12	4.8
30	2.0	1.9	1.5	1.3	---	1.7	8.0	22	127	48	11	4.6
31	2.0	---	1.5	1.3	---	2.0	---	23	---	41	10	---
TOTAL	118.9	56.7	52.1	44.4	34.6	43.6	145.2	488.1	3033	2263	642	218.6
MEAN	3.84	1.89	1.68	1.43	1.24	1.41	4.84	15.7	101	73.0	20.7	7.29
MAX	10	2.0	1.9	1.5	1.3	2.0	10	33	174	127	39	10
MIN	2.0	1.4	1.5	1.3	1.1	1.3	2.5	7.0	19	41	10	4.6
AC-FT	236	112	103	88	69	86	288	968	6020	4490	1270	434

CAL YR 1977 TOTAL 3393.70 MEAN 9.30 MAX 78 MIN .80 AC-FT 6730
WTR YR 1978 TOTAL 7140.20 MEAN 19.6 MAX 174 MIN 1.1 AC-FT 14160

NOTE.--NO GAGE-HEIGHT RECORD OCT.7 TO JUNE 6.

09052800 SLATE CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°45'47", long 106°11'31", in SW¼NW¼ sec.25, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on left bank 0.2 mi (0.3 km) upstream from unnamed tributary, 2.7 mi (4.3 km) upstream from mouth, and 12 mi (19.3 km) northwest of Dillon.

DRAINAGE AREA.--14.2 mi² (36.8 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,040 ft (2,755 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 24.0 ft³/s (0.680 m³/s) 17,390 acre-ft/yr (21.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266 ft³/s (7.53 m³/s) June 19, 1974, gage height, 5.56 ft (1.695 m), from rating curve extended above 170 ft³/s (4.8 m³/s); maximum gage height, 6.56 ft (1.999 m) May 2, 1975 (backwater from beaver dam and ice); minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Mar. 14, 1974, Jan. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 16	0200	229	6.49	5.45	1.661	June 25	0200	*260	7.36	5.50	1.676

Minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Feb. 20-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	6.2	3.4	2.7	2.2	2.5	6.0	12	49	168	53	13
2	10	6.2	3.4	2.7	2.2	2.5	6.8	11	53	135	57	13
3	10	6.0	3.5	2.7	2.2	2.5	7.2	13	66	136	48	12
4	11	6.0	3.4	2.7	2.2	2.5	6.0	14	72	124	41	13
5	11	5.9	3.3	2.7	2.2	2.5	5.5	13	58	112	38	11
6	12	5.9	3.2	2.7	2.2	2.5	5.5	12	51	104	37	12
7	16	5.6	3.2	2.7	2.2	2.5	5.5	11	66	92	37	12
8	12	5.5	3.1	2.6	2.2	2.5	5.5	9.7	67	105	40	12
9	10	5.0	3.1	2.6	2.2	2.5	6.0	13	84	109	35	11
10	9.8	4.8	3.0	2.6	2.2	2.5	6.4	9.5	141	92	36	11
11	8.6	4.6	3.0	2.6	2.2	2.5	7.4	13	167	112	34	13
12	8.1	4.6	2.8	2.6	2.2	2.5	8.0	16	157	130	37	13
13	8.1	4.5	2.7	2.6	2.2	2.5	8.3	18	154	119	37	13
14	8.3	4.2	2.7	2.4	2.2	2.5	7.0	27	160	106	41	8.7
15	8.0	4.1	2.7	2.4	2.2	2.5	7.7	44	164	107	40	7.0
16	8.0	4.0	2.8	2.3	2.2	2.5	8.4	60	177	120	28	6.4
17	7.9	4.0	2.7	2.3	2.2	2.5	8.9	62	144	140	25	6.7
18	7.9	4.0	2.7	2.3	2.2	2.5	8.5	44	112	124	24	8.5
19	7.4	4.1	3.0	2.3	2.1	2.5	7.8	33	120	101	19	8.9
20	7.4	4.2	3.0	2.3	2.0	2.5	8.7	39	125	84	17	9.8
21	7.4	4.3	3.0	2.3	2.0	2.5	9.6	49	135	86	17	8.3
22	7.5	4.1	2.8	2.3	2.0	2.5	8.5	53	166	78	20	8.1
23	7.1	3.9	2.7	2.2	2.0	2.7	8.0	64	187	65	22	6.0
24	6.9	3.8	2.6	2.2	2.0	2.8	9.2	70	199	60	22	7.6
25	6.9	3.6	2.7	2.2	2.0	2.8	12	71	209	59	19	7.5
26	6.9	3.6	2.6	2.2	2.0	3.0	16	62	163	61	19	7.1
27	6.7	3.5	2.4	2.2	2.1	3.0	19	67	135	63	16	6.6
28	6.5	3.5	2.4	2.2	2.3	3.0	19	54	145	65	15	6.2
29	6.5	3.6	2.4	2.2	---	3.5	19	43	141	66	15	5.3
30	6.4	3.6	2.7	2.2	---	4.0	14	52	156	67	14	5.3
31	6.3	---	2.6	2.2	---	5.0	---	56	---	60	14	---
TOTAL	266.6	136.9	89.6	75.2	60.1	84.8	275.4	1115.2	3823	3050	917	282.0
MEAN	8.60	4.56	2.89	2.43	2.15	2.74	9.18	36.0	127	98.4	29.6	9.40
MAX	16	6.2	3.5	2.7	2.3	5.0	19	71	209	168	57	13
MIN	6.3	3.5	2.4	2.2	2.0	2.5	5.5	9.5	49	59	14	5.3
AC-FT	529	272	178	149	119	168	546	2210	7580	6050	1820	559

CAL YR 1977 TOTAL 5178.2 MEAN 14.2 MAX 131 MIN 1.0 AC-FT 10270
WTR YR 1978 TOTAL 10175.8 MEAN 27.9 MAX 209 MIN 2.0 AC-FT 20180

NOTE.--NO GAGE-HEIGHT RECORD JAN. 1 TO APR. 11.

09054000 BLACK CREEK BELOW BLACK LAKE, NEAR DILLON, CO

LOCATION.--Lat 39°47'59", long 106°16'04", in SW¼SW¼ sec.8, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on right bank 600 ft (180 m) upstream from bridge, 0.3 mi (0.5 km) downstream from Black Lake, 4.5 mi (7.2 km) upstream from high-water line of Green Mountain Reservoir at elevation 7,950 ft (2,423.2 m), and 17 mi (27 km) northwest of Dillon.

DRAINAGE AREA.--15.0 mi² (38.8 km²).

PERIOD OF RECORD.--July 1942 to September 1949, October 1966 to current year.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-77-2: 1976.

GAGE.--Water-stage recorder. Altitude of gage is 8,750 ft (2,667 m), from topographic map. July 17, 1942, to May 27, 1943, nonrecording gage, and May 28, 1943, to Sept. 30, 1949, water-stage recorder at site 500 ft (180 m) downstream at different datums.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--19 years, 31.1 ft³/s (0.881 m³/s), 22,530 acre-ft/yr (27.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 384 ft³/s (10.9 m³/s) July 1, 1943, gage height, 4.72 ft (1.439 m), site and datum then in use, from rating curve extended above 260 ft³/s (7.4 m³/s); minimum daily, 1.3 ft³/s (0.037 m³/s) Feb. 22, 1976, Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 271 ft³/s (7.67 m³/s) at 0100 June 16, gage height, 4.09 ft (1.247 m), only peak above base of 160 ft³/s (4.5 m³/s); minimum daily, 2.2 ft³/s (0.062 m³/s) Feb. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.9	3.6	3.8	2.7	2.8	3.8	8.0	38	182	63	21
2	9.1	4.8	3.5	3.5	2.7	3.0	3.8	7.3	44	146	68	21
3	8.5	4.8	3.5	3.5	2.7	3.2	3.8	7.4	52	151	55	20
4	8.2	4.8	3.5	3.5	2.7	3.3	3.7	8.5	72	142	47	21
5	8.5	4.8	3.5	3.5	2.7	3.5	3.7	9.0	51	129	41	20
6	13	4.7	3.5	3.5	2.7	3.5	3.7	7.5	50	123	41	20
7	28	4.6	3.5	3.5	2.7	3.5	4.0	6.7	88	118	45	21
8	21	4.6	3.5	3.5	2.7	3.4	4.9	6.1	89	128	48	22
9	16	4.6	3.5	3.5	2.7	3.3	6.0	5.1	117	130	45	20
10	14	4.0	3.5	3.5	2.7	3.3	7.6	5.3	187	115	46	19
11	11	3.8	3.5	3.5	2.7	3.3	9.0	7.5	203	135	44	20
12	9.5	3.7	3.5	3.5	2.7	3.3	7.4	9.6	180	160	47	19
13	9.8	3.6	3.5	3.5	2.7	3.3	7.4	9.4	183	148	47	15
14	9.4	3.6	3.5	3.5	2.7	3.2	7.4	17	189	129	52	12
15	8.9	3.5	3.6	3.5	2.7	3.1	7.4	38	205	126	44	11
16	8.5	3.5	3.8	3.5	2.7	3.0	7.4	64	214	143	31	9.4
17	8.2	2.8	3.8	3.5	2.7	3.0	7.5	73	175	155	26	8.5
18	7.8	2.8	3.8	3.5	2.7	3.0	7.6	41	142	148	27	8.9
19	7.4	2.8	3.8	3.5	2.4	3.0	6.7	29	149	126	24	11
20	7.1	2.8	3.8	3.5	2.3	3.0	6.2	31	150	109	20	12
21	7.1	2.8	3.8	3.2	2.3	3.0	6.5	41	159	104	21	11
22	7.1	2.8	3.8	3.0	2.3	3.0	7.0	43	187	93	25	11
23	6.7	2.8	3.8	3.0	2.2	3.1	6.1	58	206	78	31	11
24	6.5	2.9	3.8	3.0	2.2	3.2	5.6	74	214	71	28	11
25	6.1	2.9	3.8	3.0	2.3	3.2	6.0	70	227	72	26	11
26	5.5	3.0	3.8	2.8	2.4	3.3	7.5	58	182	79	25	10
27	5.2	3.1	3.8	2.7	2.5	3.4	12	67	148	77	23	9.3
28	5.1	3.5	3.8	2.7	2.6	3.4	11	44	163	81	23	8.5
29	4.7	3.7	3.8	2.7	---	3.5	9.2	35	167	80	22	7.6
30	5.1	3.7	3.8	2.7	---	3.6	8.8	47	179	88	21	6.8
31	5.2	---	3.8	2.7	---	3.7	---	49	---	74	21	---
TOTAL	288.2	110.7	113.5	101.8	72.1	100.4	198.7	976.4	4420	3640	1127	429.0
MEAN	9.30	3.69	3.66	3.28	2.58	3.24	6.62	31.5	147	117	36.4	14.3
MAX	28	4.9	3.8	3.8	2.7	3.7	12	74	227	182	68	22
MIN	4.7	2.8	3.5	2.7	2.2	2.8	3.7	5.1	38	71	20	6.8
AC-FT	572	220	225	202	143	199	394	1940	8770	7220	2240	851

CAL YR 1977 TOTAL 7135.6 MEAN 19.5 MAX 156 MIN 1.3 AC-FT 14150
WTR YR 1978 TOTAL 11577.8 MEAN 31.7 MAX 227 MIN 2.2 AC-FT 22960

NOTE.--NO GAGE-HEIGHT RECORD JAN. 21 TO APR. 18.

09055300 CATARACT CREEK NEAR KREMMLING, CO

LOCATION.--Lat 39°50'07", long 106°18'57", in SW¼NE¼ sec.35, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on right bank 70 ft (21 m) downstream from lower Cataract Lake, 2.8 mi (4.5 km) upstream from high-water line of Green Mountain Reservoir at elevation 7,950 ft (2,423.2 m), and 17 mi (27 km) south of Kremmling.

DRAINAGE AREA.--12.0 mi² (31.1 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,605 ft (2,623 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair, and those for period of no gage-height record, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 19.1 ft³/s (0.541 m³/s), 13,840 acre-ft/yr (17.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 321 ft³/s (9.09 m³/s) June 21, 1967, gage height, 5.43 ft (1.655 m), from rating curve extended above 180 ft³/s (5.1 m³/s); minimum daily, 0.28 ft³/s (0.008 m³/s) Oct. 7, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s (7.05 m³/s) at 0300 June 16, gage height, 5.02 ft (1.530 m), only peak above base of 160 ft³/s (4.5 m³/s); minimum daily, 0.90 ft³/s (0.025 m³/s) Feb. 19-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.1	1.4	1.3	1.1	1.2	3.3	8.8	47	120	28	3.8
2	2.6	2.2	1.4	1.3	1.1	1.3	3.9	7.4	50	110	26	3.7
3	2.4	1.9	1.5	1.3	1.1	1.5	4.0	7.8	64	105	25	4.1
4	2.3	1.9	1.5	1.3	1.1	1.5	3.7	8.6	78	100	21	4.4
5	2.3	1.8	1.5	1.3	1.1	1.5	3.7	9.4	66	100	19	4.0
6	2.6	1.8	1.5	1.3	1.1	1.5	3.5	7.6	60	100	18	3.9
7	7.4	1.8	1.5	1.3	1.1	1.4	3.7	6.5	81	110	16	3.5
8	8.7	1.8	1.5	1.3	1.1	1.4	4.8	5.8	80	110	15	2.6
9	6.1	1.7	1.5	1.3	1.1	1.3	6.6	5.3	87	95	15	3.0
10	4.7	1.7	1.5	1.3	1.1	1.3	6.3	5.9	145	88	14	3.0
11	3.8	1.7	1.5	1.3	1.1	1.2	5.2	7.3	184	100	14	3.2
12	3.5	1.6	1.4	1.3	1.1	1.3	5.4	12	166	90	14	3.7
13	3.4	1.5	1.3	1.3	1.1	1.3	5.4	12	166	80	15	3.8
14	3.3	1.5	1.3	1.3	1.1	1.3	5.1	21	184	71	22	3.8
15	3.4	1.5	1.2	1.3	1.1	1.3	5.1	37	165	64	22	3.7
16	3.6	1.3	1.2	1.3	1.1	1.3	5.1	51	209	66	17	3.3
17	3.3	1.1	1.2	1.3	1.0	1.2	5.5	53	172	67	13	3.3
18	3.2	.93	1.2	1.3	1.0	1.2	4.9	34	134	68	10	3.2
19	3.0	.99	1.3	1.3	.90	1.2	4.2	26	141	58	8.0	3.1
20	2.9	1.2	1.3	1.3	.90	1.3	4.1	30	148	50	7.3	4.1
21	2.9	1.4	1.3	1.1	.90	1.2	4.5	42	144	48	6.7	4.7
22	2.9	1.5	1.3	1.1	.90	1.3	4.9	50	173	45	5.7	4.4
23	2.8	1.5	1.3	1.1	.90	1.3	4.6	71	181	39	5.8	5.2
24	2.7	1.5	1.3	1.1	.90	1.4	4.2	88	193	35	5.8	4.8
25	2.6	1.6	1.4	1.1	.90	1.4	4.9	76	211	33	6.1	4.4
26	2.5	1.5	1.3	1.1	.96	1.5	7.6	62	170	33	5.7	4.3
27	2.3	1.5	1.3	1.1	1.0	1.5	11	61	138	32	4.7	4.0
28	2.1	1.5	1.3	1.1	1.1	1.5	12	47	140	31	4.7	3.6
29	2.0	1.5	1.2	1.1	---	1.6	9.4	40	138	31	4.6	3.2
30	2.0	1.5	1.3	1.1	---	1.8	8.8	54	127	36	4.4	3.1
31	2.1	---	1.3	1.1	---	2.3	---	62	---	32	3.8	---
TOTAL	102.1	47.02	42.0	38.1	28.96	43.3	165.4	1009.4	4062	2147	397.3	112.9
MEAN	3.29	1.57	1.35	1.23	1.03	1.40	5.51	32.6	135	69.3	12.8	3.76
MAX	8.7	2.2	1.5	1.3	1.1	2.3	12	88	211	120	28	5.2
MIN	2.0	.93	1.2	1.1	.90	1.2	3.3	5.3	47	31	3.8	2.6
AC-FT	203	93	83	76	57	86	328	2000	8060	4260	788	224

CAL YR 1977 TOTAL 3862.20 MEAN 10.6 MAX 127 MIN .38 AC-FT 7660
WTR YR 1978 TOTAL 8195.48 MEAN 22.5 MAX 211 MIN .90 AC-FT 16260

NOTE.--NO GAGE-HEIGHT RECORD JAN. 17 TO FEB. 22.

09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO

LOCATION.--Lat 39°52'49", long 106°20'00", in SW¼NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi (0.5 km) upstream from Elliott Creek, 0.3 mi (0.5 km) downstream from Green Mountain Dam, and 13 mi (21 km) southeast of Kremmling.

DRAINAGE AREA.--599 mi² (1,551 km²), includes 15.3 mi² (39.6 km²) of Elliott Creek above diversion for Elliott Creek feeder canal.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1943, published as Blue River below Green Mountain Reservoir, near Kremmling.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,682.66 ft (2,341.675 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1951, water-stage recorder at site 3.7 mi (6.0 km) downstream at different datum.

REMARKS.--Records good. Flow regulated by Green Mountain Reservoir (station 09057000). Diversions for irrigation of about 5,000 acres (20.2 km²) above station. Transmountain diversions above station (see elsewhere in this report). Several observations of specific conductance and water temperatures were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) June 4, 1938, gage height, 5.93 ft (1.807 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85 m³/s); minimum daily (prior to construction of Green Mountain Reservoir), 80 ft³/s (2.27 m³/s) Feb. 18-24, 1938, Feb. 18, 19, 1940; no flow at times in 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 984 ft³/s (27.9 m³/s) at 1645 July 18, gage height, 5.73 ft (1.737 m); minimum daily, 51 ft³/s (1.44 m³/s) Apr. 12-19, Apr. 22 to May 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	187	148	199	249	249	140	51	59	57	475	540
2	332	187	148	198	256	249	139	51	59	57	494	606
3	364	187	148	196	254	250	140	51	59	57	456	605
4	541	187	147	197	253	249	140	53	59	57	352	606
5	541	186	148	199	252	246	142	58	59	61	333	603
6	527	187	148	198	248	248	141	57	59	185	334	604
7	448	187	149	209	250	246	115	57	57	294	304	647
8	451	186	149	212	253	248	93	57	57	294	306	703
9	451	185	149	213	251	221	91	57	57	294	337	699
10	451	134	148	221	248	194	91	57	57	295	386	702
11	451	72	149	222	251	193	68	59	57	293	479	702
12	448	70	150	221	250	190	51	59	58	294	479	668
13	448	70	148	221	249	190	51	59	58	478	478	592
14	451	70	149	229	252	192	51	59	58	587	500	588
15	448	63	150	228	249	193	51	59	58	588	542	565
16	165	119	149	230	255	192	51	58	58	585	633	541
17	164	154	191	226	249	181	51	59	58	626	632	541
18	165	155	198	231	250	171	51	59	58	744	552	513
19	139	152	195	230	249	169	51	59	59	903	531	472
20	163	152	196	230	250	159	52	59	59	907	535	427
21	164	152	196	231	250	142	52	58	59	912	596	427
22	163	152	199	231	249	141	51	58	59	912	730	375
23	160	151	198	231	249	143	51	58	59	909	732	346
24	162	149	199	231	251	143	51	59	59	652	734	346
25	164	155	198	232	251	145	51	59	59	492	654	349
26	163	153	199	235	248	141	51	59	60	494	511	343
27	163	153	200	238	249	142	51	59	57	496	509	343
28	171	151	200	239	250	141	51	59	57	493	508	346
29	189	154	202	241	---	140	51	59	57	496	509	346
30	188	148	197	240	---	142	51	59	57	498	510	343
31	186	---	201	247	---	144	---	59	---	496	508	---
TOTAL	9370	4408	5346	6906	7015	5794	2271	1784	1746	14506	15419	15491
MEAN	302	147	172	223	251	187	75.7	57.5	58.2	468	497	516
MAX	541	187	202	247	256	250	142	59	60	912	734	705
MIN	139	63	147	196	248	140	51	51	57	57	333	343
AC-FT	18590	8740	10600	13700	13910	11490	4500	3540	3460	28770	30580	30730

CAL YR 1977 TOTAL 109702 MEAN 301 MAX 908 MIN 51 AC-FT 217600
WTR YR 1978 TOTAL 90056 MEAN 247 MAX 912 MIN 51 AC-FT 178600

09058000 COLORADO RIVER NEAR KREMMLING, CO

LOCATION.--Lat 40°02'12", long 106°26'22", in NE¼SW¼ sec.23, T.1 N., R.81 W., Grand County, Hydrologic Unit 14010001, on right bank at upstream end of Gore Canyon, 3.0 mi (4.8 km) southwest of Kremmling, and 3.8 mi (6.1 km) downstream from Blue River.

DRAINAGE AREA.--2,382 mi² (6,169 km²).

PERIOD OF RECORD.--July 1904 to September 1918 (published as Grand River near Kremmling), October 1961 to September 1970, October 1971 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,320 ft (2,231 m), from topographic map. See WSP 1313 for history of changes prior to Oct. 1, 1961.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres (162 km²) above station, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft³/s (609 m³/s) June 7, 1912, gage height, 21.8 ft (6.64 m), datum then in use, from rating curve extended above 14,000 ft³/s (400 m³/s); minimum observed, 166 ft³/s (1.70 m³/s) Dec. 19, 1907.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,100 ft³/s (87.8 m³/s) at 1400 May 25, gage height, 9.05 ft (2.758 m); minimum daily, 259 ft³/s (7.33 m³/s) Nov. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	838	449	332	380	448	459	806	1060	2560	1330	982	856
2	840	440	370	381	458	460	831	998	2280	1210	936	940
3	811	435	370	390	450	464	842	1060	2180	1110	893	943
4	612	422	370	410	459	459	809	1180	2110	990	805	950
5	730	407	372	423	451	470	744	1160	2150	834	739	941
6	743	409	375	420	450	476	697	1070	2200	779	673	935
7	765	405	370	416	453	479	697	977	2090	947	652	937
8	811	403	376	420	455	477	728	946	2150	973	653	1020
9	781	386	359	420	453	469	811	885	2140	965	642	1020
10	748	365	350	420	449	433	734	912	2260	987	640	1020
11	734	259	340	428	453	436	655	967	2610	1020	889	1040
12	689	265	340	426	457	433	678	1020	2900	1020	897	1030
13	645	268	340	431	436	438	727	1050	2700	1080	894	942
14	641	269	340	435	452	427	707	1190	2560	1250	908	938
15	639	280	340	430	454	419	718	1470	2550	1260	926	936
16	458	270	330	433	455	419	761	1900	2540	1290	1010	907
17	366	330	317	444	439	413	802	2350	2420	1330	1040	907
18	365	338	340	441	426	402	732	2490	2190	1370	889	913
19	341	355	350	426	441	425	703	2050	1890	1500	754	897
20	354	290	350	430	450	454	676	1830	1680	1460	740	874
21	369	282	355	430	450	444	687	1880	1490	1450	756	863
22	379	348	370	430	450	468	743	2190	1380	1430	887	831
23	366	354	380	430	463	465	717	2550	1350	1410	899	780
24	361	332	390	430	466	463	672	2790	1340	1310	906	782
25	384	364	390	430	455	445	714	3040	1340	1040	923	776
26	389	383	390	430	455	458	821	3060	1290	1010	847	770
27	383	367	390	441	461	480	975	2730	1160	987	824	792
28	381	367	390	419	464	505	1020	2590	1120	962	809	787
29	410	354	390	430	---	540	973	2330	1170	965	808	776
30	443	375	390	430	---	587	1030	2180	1270	1010	832	770
31	447	---	390	437	---	656	---	2350	---	999	842	---
TOTAL	17223	10571	11256	13141	12653	14423	23210	54255	59070	35278	25875	26873
MEAN	556	352	363	424	452	465	774	1750	1969	1138	835	896
MAX	840	449	390	444	466	656	1030	3060	2900	1500	1040	1040
MIN	341	259	317	380	426	402	655	885	1120	779	640	770
AC-FT	34160	20970	22330	26070	25100	28610	46040	107600	117200	69970	51320	53300

CAL YR 1977 TOTAL 214549 MEAN 588 MAX 1180 MIN 259 AC-FT 425600
WTR YR 1978 TOTAL 303828 MEAN 832 MAX 3060 MIN 259 AC-FT 602600

09058500 PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO

LOCATION.--Lat 39°42'29", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi (2.3 km) upstream from Dickson Creek, 2.0 mi (3.2 km) downstream from Piney Lake, and 8.5 mi (13.7 km) north of Minturn.

DRAINAGE AREA.--13.0 mi² (33.7 km²).

PERIOD OF RECORD.--October 1947 to September 1954, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 9,145.25 ft (2,787.472 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October 1963, water-stage recorder at site 15 ft (5 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--22 years, 23.9 ft³/s (0.677 m³/s), 17,320 acre-ft/yr (21.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 413 ft³/s (11.7 m³/s) July 5, 1975, gage height, 5.47 ft (1.667 m); maximum gage height observed, 6.44 ft (1.963 m) Apr. 13, 1977; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 315 ft³/s (8.92 m³/s) at 0500 June 16, gage height, 5.13 ft (1.564 m), only peak above base of 150 ft³/s (4.2 m³/s); minimum daily, 1.0 ft³/s (0.026 m³/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	3.2	2.5	1.9	1.5	1.3	9.2	18	73	164	24	6.3
2	5.8	3.6	2.5	1.9	1.5	1.3	7.4	20	87	137	23	10
3	5.1	3.2	2.5	1.9	1.5	1.3	6.0	22	102	140	19	6.9
4	5.1	3.4	2.5	2.0	1.5	1.3	5.2	21	107	130	17	5.2
5	5.1	3.8	2.5	2.0	1.5	1.3	6.6	19	84	117	15	2.9
6	7.7	3.7	2.5	1.8	1.6	1.4	5.8	16	73	109	14	3.3
7	19	3.2	2.5	1.8	1.6	1.3	9.0	15	112	100	14	3.5
8	14	3.3	2.5	1.8	1.6	1.2	12	13	105	105	13	4.1
9	11	3.2	2.4	1.8	1.6	1.3	16	14	136	105	13	12
10	9.6	3.0	2.5	1.8	1.6	1.3	14	17	237	83	12	18
11	7.0	2.8	2.5	1.8	1.6	1.2	10	21	250	94	12	21
12	7.0	2.6	2.5	1.8	1.7	1.1	12	20	203	94	16	19
13	7.0	2.6	2.5	1.8	1.7	1.1	15	25	205	95	16	20
14	7.0	2.6	2.5	1.8	1.7	1.1	12	43	220	88	18	18
15	7.0	2.5	2.5	1.8	1.7	1.0	12	69	227	81	19	14
16	7.0	2.5	2.6	1.8	1.7	1.2	13	108	256	85	14	12
17	6.4	2.5	2.7	1.8	1.6	1.5	15	137	209	91	11	11
18	6.4	2.5	2.7	1.8	1.4	1.7	13	79	164	79	9.1	15
19	5.8	2.5	2.6	1.8	1.8	1.6	13	55	168	67	9.1	19
20	5.1	2.5	2.2	1.9	1.7	1.6	13	51	172	58	7.6	21
21	5.6	2.5	2.2	1.9	1.6	1.6	14	54	168	54	6.5	18
22	5.8	2.5	2.3	1.9	1.5	1.9	15	57	195	48	7.3	18
23	5.5	2.5	2.4	1.9	1.2	1.8	13	74	210	38	7.9	18
24	4.9	2.5	2.4	1.8	1.3	1.6	14	102	215	33	7.6	15
25	4.5	2.5	2.4	2.0	1.3	1.5	19	108	230	31	6.9	12
26	4.0	2.5	2.3	1.9	1.3	1.8	23	94	189	30	6.3	9.5
27	3.6	2.5	2.2	1.9	1.3	2.3	25	104	154	27	6.1	7.8
28	3.2	2.5	2.1	1.8	1.3	3.0	22	77	164	28	5.3	6.6
29	3.1	2.5	2.0	1.7	---	3.8	19	64	158	29	5.2	4.4
30	3.2	2.5	2.0	1.6	---	4.6	19	83	153	33	4.9	4.0
31	3.3	---	2.0	1.5	---	8.0	---	89	---	27	4.4	---
TOTAL	200.6	84.2	74.5	56.7	42.9	58.0	402.2	1689	5026	2400	364.2	355.5
MEAN	6.47	2.81	2.40	1.83	1.53	1.87	13.4	54.5	168	77.4	11.7	11.9
MAX	19	3.8	2.7	2.0	1.8	8.0	25	137	256	164	24	21
MIN	3.1	2.5	2.0	1.5	1.2	1.0	5.2	13	73	27	4.4	2.9
AC-FT	398	167	148	112	85	115	798	3350	9970	4760	722	705

CAL YR 1977 TOTAL 4675.50 MEAN 12.8 MAX 153 MIN .80 AC-FT 9270
WTR YR 1978 TOTAL 10753.80 MEAN 29.5 MAX 256 MIN 1.0 AC-FT 21330

NOTE.--NO GAGE-HEIGHT RECORD NOV. 17 TO APR. 18.

09058610 DICKSON CREEK NEAR VAIL, CO

LOCATION.--Lat 39°42'14", long 106°27'25", Eagle County, Hydrologic Unit 14010001, on right bank 0.6 mi (1.0 km) upstream from Freeman Creek, 1.0 mi (1.6 km) upstream from mouth, and 6 mi (9.7 km) northwest of Vail.

DRAINAGE AREA.--3.41 mi^2 (8.83 km^2).

PERIOD OF RECORD.--October 1971 to current year. Prior to October 1972, published as "near Minturn."

GAGE.--Water-stage recorder. Altitude of gage is 9,245 ft (2,818 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversion by Willy N. ditch 75 ft (23 m) above station for irrigation of hay meadows below station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years, 2.58 ft^3/s (0.073 m^3/s), 1,870 acre-ft/yr (2.31 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27 ft^3/s (0.76 m^3/s) June 5, 1974, gage height, 2.57 ft (0.783 m); maximum gage height recorded, 2.92 ft (0.890 m) Nov. 16, 1973 (backwater from ice); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft^3/s (0.71 m^3/s) at 1800 June 11, gage height, 2.51 ft (0.765 m); minimum daily, 0.40 ft^3/s (0.011 m^3/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.66	.56	.52	.52	.50	.66	1.8	16	8.6	2.2	1.6
2	.55	.66	.60	.52	.52	.50	.62	2.2	16	7.9	2.0	1.6
3	.66	.66	.60	.56	.52	.50	.54	2.8	17	7.6	1.7	1.6
4	.66	.66	.60	.60	.52	.50	.50	2.5	17	7.2	1.8	1.6
5	.72	.66	.58	.56	.54	.50	.54	1.8	16	6.5	1.7	1.6
6	.96	.72	.58	.52	.56	.49	.52	1.6	16	5.4	1.7	1.6
7	1.0	.72	.60	.52	.58	.47	.60	1.5	18	5.1	1.6	1.7
8	.72	.60	.60	.52	.58	.49	.70	1.4	19	4.8	1.6	1.7
9	.55	.50	.60	.52	.58	.50	.78	1.6	19	5.1	1.6	1.7
10	.55	.60	.60	.52	.58	.50	.68	3.1	22	4.8	1.7	1.8
11	.55	.55	.60	.52	.60	.48	.58	3.4	24	4.8	1.7	2.0
12	.50	.55	.60	.52	.60	.45	.68	3.1	24	4.2	2.2	1.8
13	.50	.55	.60	.52	.60	.41	.72	4.8	23	4.0	2.0	1.7
14	.50	.55	.58	.52	.60	.41	.64	7.6	24	3.7	3.1	1.7
15	.50	.60	.56	.52	.60	.40	.56	12	23	4.0	2.2	1.7
16	.50	.60	.60	.52	.58	.41	.62	15	22	4.0	1.7	1.6
17	.60	.60	.62	.52	.52	.42	.70	13	20	4.0	1.6	2.0
18	.60	.60	.62	.54	.54	.45	.55	8.6	18	3.7	1.5	2.0
19	.66	.60	.58	.56	.56	.47	.55	8.6	17	3.4	1.6	2.0
20	.66	.58	.56	.56	.56	.44	.60	10	16	3.4	1.6	1.8
21	.78	.52	.56	.56	.54	.46	.78	11	15	3.4	2.2	1.7
22	.66	.56	.58	.56	.50	.50	.72	13	15	2.8	1.8	1.6
23	.60	.60	.60	.56	.45	.48	.66	15	15	2.8	1.7	1.5
24	.60	.60	.60	.52	.48	.46	.66	16	14	2.5	1.6	1.4
25	.60	.60	.58	.56	.49	.43	.96	16	14	2.8	1.7	1.4
26	.55	.60	.56	.58	.50	.46	1.2	15	12	2.5	1.6	1.3
27	.55	.60	.56	.58	.50	.49	1.3	14	11	2.2	1.5	1.3
28	.55	.60	.56	.56	.50	.52	1.0	13	10	2.2	1.3	1.3
29	.60	.60	.56	.54	---	.54	1.4	15	10	2.2	1.4	1.3
30	.72	.60	.56	.52	---	.58	1.7	16	9.8	2.8	1.4	1.3
31	.66	---	.54	.52	---	.60	---	16	---	2.2	1.5	---
TOTAL	19.47	18.10	18.10	16.72	15.22	14.81	22.72	266.4	512.8	130.6	54.5	48.9
MEAN	.63	.60	.58	.54	.54	.48	.76	8.59	17.1	4.21	1.76	1.63
MAX	1.0	.72	.62	.60	.60	.60	1.7	16	24	8.6	3.1	2.0
MIN	.50	.50	.54	.52	.45	.40	.50	1.4	9.8	2.2	1.3	1.3
AC-FT	39	36	36	33	30	29	45	528	1020	259	108	97

CAL YR 1977 TOTAL 235.72 MEAN .65 MAX 3.8 MIN .21 AC-FT 468
WTR YR 1978 TOTAL 1138.34 MEAN 3.12 MAX 24 MIN .40 AC-FT 2260

NOTE.--NO GAGE-HEIGHT RECORD NOV. 18 TO APR. 17.

09058700 FREEMAN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°41'55", long 106°26'41", Eagle County, Hydrologic Unit 14210001, on right bank 0.8 mi (1.3 km) upstream from mouth and 7.5 mi (12.1 km) north of Minturn.

DRAINAGE AREA.--2.94 mi^2 (7.61 km^2).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,335 ft (2,845 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 1.20 ft^3/s (0.034 m^3/s), 869 acre-ft/yr (1.07 nm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35 ft^3/s (0.99 m^3/s) May 28, 1976, gage height, 2.63 ft (0.792 m); maximum gage height, 3.51 ft (1.070 m) May 18, 1973 (backwater from ice); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17.9 ft^3/s (0.51 m^3/s) at 1700 May 24, gage height, 2.25 ft (0.686 m), no peak above base of 25 ft^3/s (0.71 m^3/s); minimum daily, 0.02 ft^3/s (<0.001 m^3/s) on Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.08	.06	.04	.03	.04	.21	.91	11	1.8	.32	.19
2	.12	.12	.06	.04	.03	.04	.20	1.1	11	1.4	.35	.18
3	.12	.12	.06	.04	.03	.04	.16	1.2	12	1.2	.35	.19
4	.10	.10	.06	.04	.03	.04	.14	1.2	11	1.1	.29	.20
5	.12	.10	.06	.04	.03	.04	.16	1.1	9.5	.95	.28	.20
6	.16	.08	.06	.04	.03	.04	.18	.94	9.4	.78	.24	.18
7	.20	.08	.06	.03	.04	.04	.21	.82	10	.73	.24	.16
8	.18	.08	.06	.04	.04	.04	.25	.80	11	.67	.24	.15
9	.14	.08	.06	.04	.04	.04	.28	.88	11	.67	.27	.15
10	.12	.08	.06	.04	.04	.04	.27	.97	12	.61	.27	.19
11	.14	.06	.06	.04	.04	.04	.24	1.1	12	.62	.37	.34
12	.18	.06	.06	.04	.06	.04	.25	1.1	12	.61	.44	.31
13	.16	.06	.06	.04	.06	.04	.26	1.2	11	.66	.56	.24
14	.14	.06	.06	.04	.05	.04	.27	2.3	11	.62	.75	.20
15	.12	.06	.06	.04	.05	.02	.28	4.9	10	.65	.61	.20
16	.11	.06	.06	.04	.04	.03	.29	7.9	9.7	.78	.36	.18
17	.10	.06	.06	.04	.04	.04	.28	8.0	8.4	.73	.29	.26
18	.08	.06	.06	.04	.04	.06	.31	5.3	7.2	.63	.28	.33
19	.08	.06	.05	.04	.04	.06	.27	4.8	6.2	.54	.27	.42
20	.08	.06	.04	.04	.04	.06	.26	6.0	5.3	.59	.26	.38
21	.10	.05	.06	.04	.04	.06	.27	6.5	4.6	.56	.25	.43
22	.10	.05	.06	.04	.04	.08	.30	8.0	4.1	.51	.27	.42
23	.08	.06	.06	.04	.04	.06	.29	10	3.8	.44	.25	.33
24	.08	.06	.06	.04	.04	.06	.29	13	3.3	.45	.26	.26
25	.08	.06	.06	.04	.04	.06	.46	11	2.9	.40	.25	.25
26	.08	.06	.06	.04	.04	.08	.67	11	2.8	.37	.25	.25
27	.08	.06	.05	.04	.04	.10	.77	9.3	2.4	.35	.23	.23
28	.08	.06	.05	.04	.04	.12	.77	8.4	2.2	.32	.22	.19
29	.08	.06	.04	.04	---	.16	.83	9.8	2.2	.34	.21	.20
30	.08	.06	.04	.04	---	.18	.90	11	2.4	.57	.21	.19
31	.06	---	.04	.04	---	.20	---	10	---	.37	.19	---
TOTAL	3.47	2.10	1.75	1.23	1.12	1.99	10.32	160.52	231.6	21.02	9.63	7.40
MEAN	.11	.070	.056	.040	.040	.064	.34	5.18	7.72	.68	.31	.25
MAX	.20	.12	.06	.04	.06	.20	.90	13	12	1.8	.75	.43
MIN	.06	.05	.04	.03	.03	.02	.14	.80	2.2	.32	.19	.15
AC-FT	6.9	4.2	3.5	2.4	2.2	3.9	20	318	459	42	19	15

CAL YR 1977 TOTAL 104.50 MEAN .29 MAX 3.0 MIN .00 AC-FT 207
WTR YR 1978 TOTAL 452.15 MEAN 1.24 MAX 13 MIN .02 AC-FT 897

NOTE.--NO GAGE-HEIGHT RECORD OCT. 1 TO APR. 24.

09058800 EAST MEADOW CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°43'54", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi (2.3 km) upstream from mouth and 10 mi (16 km) north of Minturn.

DRAINAGE AREA.--3.61 mi^2 (9.35 km^2).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,455 ft (2,882 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 4.30 ft^3/s (0.122 m^3/s), 3,120 acre-ft/yr (3.85 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74 ft^3/s (2.10 m^3/s) July 4, 1975, gage height, 2.13 ft (0.649 m); maximum gage height, 2.22 ft (0.677 m) May 12, 1970 (backwater from ice); minimum daily discharge, 0.40 ft^3/s (0.011 m^3/s) Feb. 22, 1976, Apr. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft^3/s (1.67 m^3/s) at 2000 June 15, gage height, 2.12 ft (0.646 m), only peak above base of 40 ft^3/s (1.1 m^3/s); minimum daily, 0.34 ft^3/s (0.010 m^3/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.70	.50	.35	.40	.40	1.0	1.4	17	34	2.1	.98
2	.62	.75	.50	.35	.40	.40	.90	1.5	20	31	2.1	.98
3	.62	.80	.50	.35	.40	.40	.75	1.8	22	27	2.0	.98
4	.62	.80	.50	.35	.40	.40	.70	1.8	23	23	1.8	.92
5	.65	.80	.50	.40	.40	.40	.75	1.6	24	19	1.6	.86
6	.77	.80	.50	.40	.45	.45	.70	1.5	25	16	1.6	.86
7	1.0	.70	.55	.40	.45	.40	.95	1.4	27	14	1.5	.86
8	.80	.65	.55	.40	.45	.45	1.3	1.4	29	13	1.4	.85
9	.74	.65	.50	.40	.50	.45	1.3	1.4	34	12	1.4	.80
10	.71	.60	.50	.40	.50	.45	1.2	1.9	39	17	1.4	.86
11	.86	.65	.50	.40	.50	.40	1.1	2.2	40	15	1.4	1.2
12	1.1	.65	.50	.40	.50	.35	1.3	2.0	39	8.5	1.5	1.0
13	1.0	.60	.50	.40	.50	.35	1.4	2.6	41	7.7	2.0	1.0
14	.86	.60	.50	.40	.50	.35	1.2	5.0	43	9.0	2.4	.98
15	.74	.55	.50	.40	.50	.34	1.2	8.5	44	6.7	2.0	.92
16	.68	.55	.50	.40	.50	.35	1.3	12	48	6.4	1.5	.98
17	.68	.50	.55	.40	.45	.35	1.3	12	44	6.4	1.3	1.1
18	.65	.55	.55	.40	.45	.40	1.3	8.0	40	5.4	1.3	1.1
19	.65	.50	.50	.45	.40	.40	1.3	7.0	41	4.7	1.3	1.2
20	.65	.45	.45	.45	.40	.40	1.3	8.0	41	4.3	1.3	1.2
21	.75	.40	.45	.45	.40	.40	1.3	10	41	4.1	1.2	1.3
22	.75	.45	.50	.45	.45	.45	1.3	11	43	3.6	1.2	1.5
23	.75	.50	.50	.45	.40	.40	1.3	14	41	3.4	1.3	1.5
24	.65	.50	.50	.45	.40	.40	1.3	18	42	3.2	1.2	1.4
25	.65	.50	.45	.45	.45	.35	1.5	18	41	2.8	1.2	1.2
26	.70	.50	.40	.50	.45	.40	1.9	16	40	2.8	1.1	1.2
27	.65	.50	.45	.45	.45	.45	2.2	16	39	2.5	1.1	1.2
28	.65	.50	.40	.50	.45	.50	1.8	13	38	2.4	1.0	1.2
29	.65	.50	.40	.45	---	.55	1.5	14	37	2.4	1.0	1.1
30	.70	.50	.40	.40	---	.70	1.5	19	36	2.6	1.0	1.1
31	.60	---	.40	.40	---	.90	---	19	---	2.2	1.0	---
TOTAL	22.55	17.70	15.00	12.85	12.50	13.39	37.85	251.0	1079	312.1	45.2	32.34
MEAN	.73	.59	.48	.41	.45	.43	1.26	8.10	36.0	10.1	1.46	1.08
MAX	1.1	.80	.55	.50	.50	.90	2.2	19	48	34	2.4	1.5
MIN	.60	.40	.40	.35	.40	.34	.70	1.4	17	2.2	1.0	.80
AC-FT	45	35	30	25	25	27	75	498	2140	619	90	64

CAL YR 1977 TOTAL 650.71 MEAN 1.78 MAX 16 MIN .40 AC-FT 1290
WTR YR 1978 TOTAL 1851.48 MEAN 5.07 MAX 48 MIN .34 AC-FT 3670

NOTE.--NO GAGE-HEIGHT RECORD OCT. 19 TO APR. 18.

09059500 PINEY RIVER NEAR STATE BRIDGE, CO

LOCATION.--Lat 39°48'00", long 106°35'00", in sec.16, T.3 S., R.82 W., Eagle County, Hydrologic Unit 14010001, on left bank at downstream side of private bridge at Perry Olsen Ranch 1.2 mi (1.9 km) downstream from Rock Creek, and 6.0 mi (9.7 km) southeast of State Bridge.

DRAINAGE AREA.--86.2 mi² (223.3 km²).

PERIOD OF RECORD.--May 1944 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,272.35 ft (2,216.612 m), National Geodetic Vertical Datum of 1929. Prior to July 29, 1944, nonrecording gage, and July 29, 1944, to Oct. 24, 1947, water-stage recorder, at datum 2.38 ft (0.725 m) higher.

REMARKS.--Records good except for period of no gage-height record, which are poor. Diversions above station for irrigation of about 400 acres (1.62 km²) of hay meadows above and below station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 73.8 ft³/s (2.090 m³/s) 53,470 acre-ft/yr (65.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) June 8, 1952, gage height, 5.61 ft (1.710 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Sept. 1, 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 862 ft³/s (24.4 m³/s) at 0730 June 16, gage height, 4.77 ft (1.460 m), only peak above base of 520 ft³/s (15 m³/s); minimum daily, 4.3 ft³/s (0.122 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	7.0	11	11	13	13	48	84	327	364	44	9.5
2	5.3	7.1	10	10	13	13	44	84	374	305	43	8.4
3	5.3	8.4	11	10	13	13	41	95	418	295	40	6.5
4	5.0	8.0	11	12	13	13	43	94	446	269	37	6.1
5	5.1	8.0	11	12	13	13	41	79	395	236	34	6.0
6	7.0	8.1	11	12	13	13	37	67	390	212	29	5.5
7	18	8.0	10	13	13	13	42	60	535	188	29	5.4
8	14	7.4	10	13	13	13	55	54	505	185	27	5.5
9	9.6	6.1	11	13	14	14	59	52	605	174	24	4.5
10	8.3	12	11	13	14	14	51	69	740	148	24	4.3
11	6.1	14	10	13	14	13	49	91	730	153	22	5.0
12	5.4	14	10	13	14	12	56	86	665	148	25	5.4
13	5.8	15	10	13	14	11	58	104	665	148	25	6.0
14	6.2	14	10	13	13	11	55	174	720	129	29	7.8
15	5.7	13	10	13	14	11	55	277	720	131	30	7.8
16	5.7	13	10	13	14	11	56	356	730	133	24	6.0
17	5.4	12	10	13	13	12	58	384	675	132	20	5.5
18	5.2	11	11	13	12	13	49	257	610	122	19	8.7
19	5.0	11	11	14	12	14	45	204	595	106	19	11
20	4.8	11	10	14	13	15	47	220	590	98	17	13
21	5.8	11	9.8	14	13	14	54	254	565	91	15	13
22	6.1	10	10	14	13	16	53	268	575	83	14	13
23	5.7	11	11	14	12	15	49	327	575	72	14	11
24	5.6	11	11	14	12	14	50	394	575	66	12	11
25	5.8	11	12	14	13	13	69	409	575	60	11	10
26	5.9	11	12	14	13	14	96	365	505	57	11	10
27	6.5	11	13	14	13	15	118	356	426	53	9.9	9.0
28	6.3	11	12	14	13	17	94	300	413	48	8.9	6.9
29	6.3	11	12	14	---	19	87	286	390	50	8.6	7.7
30	7.8	11	13	13	---	24	92	355	377	55	8.9	8.1
31	7.4	---	12	13	---	39	---	392	---	49	8.0	---
TOTAL	208.4	317.1	336.8	403	367	455	1751	6597	16411	4362	682.3	237.6
MEAN	6.72	10.6	10.9	13.0	13.1	14.7	58.4	213	547	141	22.0	7.92
MAX	18	15	13	14	14	39	118	409	740	364	44	13
MIN	4.8	6.1	9.8	10	12	11	37	52	327	48	8.0	4.3
AC-FT	413	629	668	799	728	902	3470	13090	32550	8650	1350	471

CAL YR 1977 TOTAL 9710.3 MEAN 26.6 MAX 204 MIN 3.5 AC-FT 19260
WTR YR 1978 TOTAL 32128.2 MEAN 88.0 MAX 740 MIN 4.3 AC-FT 63730

NOTE.--NO GAGE-HEIGHT RECORD NOV. 16 TO APR. 3.

09060500 ROCK CREEK NEAR TOPONAS, CO

LOCATION.--Lat 40°02'28", long 106°39'19", in NW¼ sec.24, T.1 N., R.83 W., Routt County, Hydrologic Unit 14010001, on right bank 0.1 mi (0.2 km) upstream from Horse Creek, 0.8 mi (1.3 km) downstream from Shoe and Stocking Creek, and 8 mi (13 km) east of Toponas.

DRAINAGE AREA.--47.6 mi² (123.3 km²).

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,544 ft (2,604 m), from topographic map.

REMARKS.--Records poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 32.4 ft³/s (0.918 m³/s), 23,470 acre-ft/yr (28.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 494 ft³/s (14.0 m³/s) May 21, 1976, gage height, 4.77 ft (1.454 m), from rating curve extended above 300 ft³/s (8.5 m³/s); maximum gage height, 5.49 ft (1.673 m) Apr. 18, 1962 (backwater from ice); minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Aug. 30, 31, Sept. 2, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 384 ft³/s (10.9 m³/s) at 2300 June 10, gage height, 4.34 ft (1.323 m), only peak above base of 200 ft³/s (5.7 m³/s); minimum daily, 5.0 ft³/s (0.14 m³/s) Jan. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	9.2	15	8.0	7.0	8.0	14	75	230	53	14	5.8
2	6.5	9.7	15	8.0	6.0	8.0	13	95	240	44	14	5.6
3	6.0	11	14	8.0	8.0	8.0	13	118	250	35	13	5.6
4	6.0	12	14	8.0	8.0	8.0	13	104	250	32	12	5.6
5	11	14	13	8.0	7.0	8.0	13	78	260	29	11	5.6
6	20	14	13	8.0	8.0	8.0	13	61	250	28	10	5.6
7	26	13	12	8.0	8.0	8.0	11	55	260	25	9.0	5.6
8	16	13	12	8.0	8.0	8.0	13	45	264	23	8.2	5.6
9	13	7.4	11	8.0	8.0	8.0	11	35	295	23	7.4	5.6
10	12	10	11	8.0	8.0	8.0	13	40	287	26	7.4	5.6
11	9.7	11	10	8.0	8.0	8.0	15	50	215	31	7.0	5.6
12	9.2	11	10	7.8	8.0	8.0	17	60	142	34	7.0	5.6
13	10	10	10	7.0	8.0	8.0	19	70	145	24	6.8	5.6
14	11	11	10	6.0	8.0	8.0	19	80	147	21	6.8	5.6
15	11	12	10	5.0	8.0	8.0	22	90	155	19	6.6	5.6
16	11	12	10	6.0	8.0	8.0	30	100	160	25	6.0	5.6
17	9.2	12	10	6.0	8.0	8.0	27	110	143	39	6.0	5.6
18	8.8	12	9.0	6.0	8.0	8.0	23	120	161	34	6.0	5.6
19	8.8	12	9.0	7.0	8.0	8.0	16	130	145	21	6.0	5.6
20	8.3	15	9.0	7.0	8.0	9.0	22	140	130	19	6.0	5.6
21	8.8	16	9.0	7.0	8.0	9.0	31	150	117	16	6.0	5.6
22	9.2	17	9.0	7.0	8.0	10	26	160	107	15	6.0	5.6
23	8.3	16	9.0	7.0	8.0	11	21	170	97	14	6.0	5.6
24	8.3	16	8.0	7.0	8.0	12	24	180	85	14	6.0	5.6
25	8.3	16	8.0	7.0	8.0	13	42	190	75	14	6.0	5.4
26	7.8	15	8.0	8.0	8.0	14	66	200	68	13	6.0	5.4
27	7.4	15	8.0	8.0	8.0	14	92	200	64	13	6.0	5.4
28	6.9	15	8.0	8.0	8.0	15	82	210	60	12	6.0	5.4
29	8.3	16	8.0	8.0	---	16	81	220	57	14	6.0	5.4
30	9.7	16	8.0	8.0	---	15	83	220	66	26	6.0	5.5
31	11	---	8.0	8.0	---	14	---	230	---	14	6.0	---
TOTAL	314.4	389.3	318.0	228.8	220.0	304.0	885	3786	4925	750	236.2	167.1
MEAN	10.1	13.0	10.3	7.38	7.86	9.81	29.5	122	164	24.2	7.62	5.57
MAX	26	17	15	8.0	8.0	16	92	230	295	53	14	5.8
MIN	6.0	7.4	8.0	5.0	6.0	8.0	11	35	57	12	6.0	5.4
AC-FT	624	772	631	454	436	603	1760	7510	9770	1490	469	331

CAL YR 1977 TOTAL 4866.8 MEAN 13.3 MAX 78 MIN 4.8 AC-FT 9650
WTR YR 1978 TOTAL 12523.8 MEAN 34.3 MAX 295 MIN 5.0 AC-FT 24840

NOTE.--NO GAGE-HEIGHT RECORD NOV. 27 to APR. 5, MAY 9 to JUNE 8.

09063000 EAGLE RIVER AT RED CLIFF, CO

LOCATION.--Lat 39°30'34", long 106°22'00", in NW¼SW¼ sec.20, T.6 S., R.80 W., Eagle County, Hydrologic unit 14010003, on left bank at Red Cliff, 0.3 mi (0.5 km) upstream from Turkey Creek.

DRAINAGE AREA.--70.0 mi² (181.3 km²).

PERIOD OF RECORD.--October 1910 to September 1925, May 1944 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area. WRD Colo. 1972: 1971.

GAGE.--Water-stage recorder. Datum of gage is 8,648.48 ft (2,636.057 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Jan. 8, 1911, to Sept. 30, 1925, nonrecording gage at bridge 0.2 mi (0.3 km) downstream at different datum. May 25, 1944, to Oct. 12, 1952, water-stage recorder at site 200 ft (61 m) upstream at datum 3.54 ft (1.079 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Transmountain diversions above station by Columbine, Ewing, and Wurtz ditches (see elsewhere in this report). Transbasin diversion above station from Robinson Reservoir, capacity, 2,520 acre-ft (3.11 hm³) to Tenmile Creek for mining development. Small diversions for irrigation of 400 acres (1.62 km²) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--49 years (water years 1911-25, 1945-78), 48.7 ft³/s (1.379 m³/s), 35,280 acre-ft/yr (43.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,010 ft³/s (28.6 m³/s) June 5, 1912, gage height, 4.0 ft (1.22 m), site and datum then in use, from rating curve extended above 500 ft³/s (14 m³/s); maximum gage height recorded, 4.23 ft (1.289 m) Nov. 28, 1972 (backwater from ice); minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Oct. 15, 1917.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 475 ft³/s (13.5 m³/s) at 2200 June 15, gage height, 3.88 ft (1.183 m), only peak above base of 280 ft³/s (7.9 m³/s); minimum daily, 6.2 ft³/s (0.176 m³/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.7	9.5	8.8	8.4	8.4	17	40	235	124	31	15
2	10	13	9.8	8.0	8.4	7.9	15	41	254	116	30	14
3	9.7	9.2	9.8	8.6	8.4	7.2	12	43	280	107	28	14
4	9.0	8.5	9.4	8.7	8.6	7.8	11	42	285	97	27	14
5	9.9	8.6	9.3	8.7	8.6	8.0	14	40	256	89	26	13
6	11	8.7	9.3	8.8	8.8	8.2	13	37	236	83	25	12
7	16	8.8	9.5	8.8	8.8	8.4	13	35	247	77	23	13
8	15	8.8	9.8	8.8	8.8	8.3	15	33	239	72	23	13
9	14	16	9.7	8.8	8.4	8.3	16	33	254	69	22	13
10	13	16	9.7	8.7	8.4	8.4	14	36	275	69	22	13
11	13	12	9.7	8.7	8.4	8.2	13	43	340	65	22	14
12	12	9.8	9.6	8.7	8.5	7.9	15	51	363	63	21	13
13	11	11	9.6	8.7	8.6	7.8	15	63	381	60	23	13
14	10	12	9.6	8.6	8.5	7.6	15	87	331	56	24	13
15	10	6.2	9.4	8.6	8.3	7.4	16	137	386	54	24	13
16	9.8	6.6	9.6	8.6	8.2	7.6	17	193	374	57	21	12
17	9.7	6.7	9.5	8.7	7.8	8.0	19	210	336	61	19	13
18	9.7	7.5	9.3	9.0	7.8	8.3	23	138	299	50	18	13
19	9.5	7.5	8.9	9.2	8.1	8.4	22	117	296	46	18	14
20	9.2	9.0	8.5	9.2	8.4	8.4	22	135	295	46	17	16
21	9.6	9.5	8.5	9.0	8.6	9.6	25	172	293	44	17	16
22	9.7	9.8	9.0	9.0	8.6	11	26	158	300	42	17	16
23	9.4	10	9.2	8.8	8.4	10	25	184	297	40	17	15
24	9.3	9.6	9.2	8.8	8.2	9.5	28	222	270	38	16	14
25	9.2	9.6	9.2	9.0	8.2	9.0	33	239	237	36	16	14
26	9.2	9.6	9.4	9.0	8.4	9.9	41	227	198	35	16	14
27	9.1	9.4	9.4	8.8	8.4	11	49	220	171	33	15	15
28	8.8	9.2	9.2	8.7	8.4	12	47	191	162	34	14	14
29	8.9	9.2	9.1	8.6	---	14	43	175	152	35	14	14
30	9.1	9.2	8.8	8.6	---	15	43	200	142	33	14	13
31	9.1	---	8.8	8.4	---	16	---	220	---	31	14	---
TOTAL	323.9	290.7	289.3	271.4	235.4	287.5	677	3762	8184	1862	634	413
MEAN	10.4	9.69	9.33	8.75	8.41	9.27	22.6	121	273	60.1	20.5	13.8
MAX	16	16	9.8	9.2	8.8	16	49	239	386	124	31	16
MIN	8.8	6.2	8.5	8.0	7.8	7.2	11	33	142	31	14	12
AC-FT	642	577	574	538	467	570	1340	7460	16230	3690	1260	819

CAL YR 1977 TOTAL 6973.2 MEAN 19.1 MAX 91 MIN 6.2 AC-FT 13830
WTR YR 1978 TOTAL 17230.2 MEAN 47.2 MAX 386 MIN 6.2 AC-FT 34180

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO APR. 15.

09063200 WEARYMAN CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'14", long 106°19'06", in SW¼SE¼ sec.15, T.6 S., R.80 W., Eagle County, Hydrologic unit 14010003, on left bank 0.4 mi (0.6 km) upstream from mouth and 2.5 mi (4.0 km) east of Red Cliff.

DRAINAGE AREA.--8.78 mi² (22.74 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,158 ft (2,791.4 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 8.12 ft³/s (0.230 m³/s), 5,880 acre-ft/yr (7.25 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 140 ft³/s (4.0 m³/s) June 18, 1965, gage height, 3.23 ft (0.985 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Feb. 21, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, "unknown"; minimum daily, 1.0 ft³/s (0.028 m³/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	1.4	1.4	1.3	1.3	1.2	1.9	2.9	18	30	9.6	3.8
2	2.5	1.5	1.4	1.2	1.3	1.2	1.7	2.9	20	29	9.2	3.6
3	2.5	1.6	1.4	1.2	1.3	1.2	1.4	2.9	18	25	8.8	3.6
4	2.5	1.5	1.4	1.3	1.3	1.2	1.3	2.9	19	23	8.4	3.8
5	2.7	1.5	1.4	1.4	1.3	1.2	1.5	2.8	16	25	7.8	3.4
6	2.8	1.5	1.4	1.3	1.3	1.2	1.4	2.7	20	26	7.4	3.0
7	3.4	1.5	1.4	1.3	1.3	1.2	1.5	2.7	27	26	7.0	3.0
8	3.0	1.5	1.4	1.3	1.3	1.2	1.8	2.6	27	25	6.6	3.4
9	2.8	1.5	1.4	1.3	1.3	1.2	1.9	6.4	26	25	6.6	3.2
10	2.8	1.5	1.4	1.3	1.3	1.1	1.7	3.0	30	25	6.4	3.4
11	6.7	1.5	1.4	1.3	1.3	1.1	1.7	3.1	42	24	6.0	3.6
12	6.6	1.5	1.3	1.3	1.3	1.1	1.7	3.0	51	23	5.8	3.2
13	4.9	1.5	1.3	1.3	1.3	1.1	1.8	3.4	59	23	5.8	2.9
14	4.1	1.5	1.3	1.3	1.3	1.1	1.9	4.6	85	22	5.8	2.9
15	3.2	1.4	1.3	1.3	1.3	1.0	1.9	7.4	100	21	5.6	3.0
16	2.7	1.2	1.3	1.3	1.3	1.1	1.9	14	130	21	5.2	2.9
17	2.5	1.2	1.4	1.3	1.3	1.1	2.0	16	120	20	4.9	2.9
18	2.6	1.3	1.4	1.3	1.2	1.2	1.9	13	90	19	4.7	2.9
19	2.5	1.4	1.3	1.3	1.3	1.3	1.9	11	70	18	4.5	3.0
20	2.6	1.5	1.3	1.3	1.3	1.3	1.9	11	70	17	4.4	3.0
21	2.7	1.5	1.3	1.3	1.3	1.3	2.0	13	80	16	4.4	3.2
22	2.4	1.5	1.3	1.3	1.3	1.4	2.1	13	90	15	4.3	3.4
23	1.9	1.5	1.3	1.3	1.2	1.3	2.0	14	100	15	4.2	3.4
24	1.9	1.5	1.3	1.3	1.2	1.2	2.1	17	120	14	4.2	3.2
25	2.0	1.5	1.3	1.4	1.2	1.1	2.3	19	100	14	4.2	2.9
26	2.2	1.5	1.3	1.3	1.2	1.2	2.7	18	80	13	4.1	2.9
27	1.9	1.5	1.3	1.3	1.2	1.3	3.0	17	66	13	4.1	2.8
28	2.0	1.5	1.3	1.3	1.2	1.4	2.9	15	28	12	4.0	2.8
29	1.9	1.5	1.3	1.3	---	1.5	2.9	14	26	11	4.0	2.9
30	1.7	1.5	1.3	1.3	---	1.6	2.9	15	28	11	3.9	3.0
31	1.6	---	1.3	1.3	---	1.8	---	17	---	10	3.9	---
TOTAL	88.1	44.0	41.6	40.3	35.7	38.4	59.6	290.3	1756	611	175.8	95.0
MEAN	2.84	1.47	1.34	1.30	1.28	1.24	1.99	9.36	58.5	19.7	5.67	3.17
MAX	6.7	1.6	1.4	1.4	1.3	1.8	3.0	19	130	30	9.6	3.8
MIN	1.6	1.2	1.3	1.2	1.2	1.0	1.3	2.6	16	10	3.9	2.8
AC-FT	175	87	83	80	71	76	118	576	3480	1210	349	188

CAL YR 1977 TOTAL 1330.00 MEAN 3.64 MAX 27 MIN .70 AC-FT 2640
WTR YR 1978 TOTAL 3275.80 MEAN 8.97 MAX 130 MIN 1.0 AC-FT 6500

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO APR. 5, JUNE 15 TO AUG. 31.

09063400 TURKEY CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'22", long 106°20'08", in NW¼SW¼ sec.15, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 400 ft (120 m) downstream from Lime Creek, 1.9 mi (3.1 km) northeast of Red Cliff, and 2.0 mi (3.2 km) upstream from mouth.

DRAINAGE AREA.--23.9 mi² (61.9 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,918 ft (2,718 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 21.5 ft³/s (0.609 m³/s), 15,580 acre-ft/yr (19.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 515 ft³/s (14.6 m³/s) June 17, 1965, gage height, 3.03 ft (0.924 m), from rating curve extended above 230 ft³/s (6.5 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 16	0800	295	8.35	*2.78	0.847	June 24	0600	*310	8.78	2.65	0.808

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.0	2.9	2.3	2.1	2.1	9.0	14	111	95	23	9.2
2	3.9	3.4	2.9	2.2	2.1	2.1	7.8	14	122	92	22	9.1
3	3.8	3.6	2.9	2.2	2.1	2.1	6.0	14	125	77	21	8.8
4	3.8	3.4	2.9	2.4	2.1	2.1	5.2	13	126	76	20	8.7
5	4.1	3.3	2.9	2.5	2.1	2.1	5.8	12	120	80	18	8.5
6	4.2	3.3	2.9	2.4	2.2	2.1	5.6	12	117	82	18	8.3
7	5.0	3.3	2.9	2.3	2.2	2.1	5.9	11	116	80	16	8.5
8	4.3	3.3	2.8	2.3	2.2	2.1	7.6	9.8	118	78	16	8.3
9	4.0	3.2	2.8	2.3	2.2	2.0	8.5	11	116	81	15	8.0
10	4.0	3.0	2.8	2.2	2.2	2.0	7.6	12	126	78	15	8.4
11	3.6	2.4	2.8	2.2	2.2	2.0	7.4	14	152	75	14	8.4
12	3.8	2.4	2.8	2.2	2.2	1.9	7.4	14	176	70	14	8.0
13	3.8	2.4	2.8	2.2	2.2	1.8	7.7	18	197	64	14	7.9
14	3.8	2.4	2.8	2.2	2.2	1.8	7.8	26	230	62	14	7.8
15	3.8	2.3	2.8	2.2	2.2	1.7	8.3	48	240	62	14	7.6
16	3.7	1.8	2.8	2.2	2.2	1.8	8.9	81	257	60	13	7.6
17	3.7	1.8	2.9	2.2	2.1	1.9	9.5	97	215	59	12	7.3
18	3.6	2.3	2.8	2.2	2.0	2.0	9.3	78	210	55	12	7.2
19	3.6	2.4	2.8	2.2	2.1	2.2	8.9	59	161	51	11	7.5
20	3.6	2.7	2.7	2.2	2.2	2.4	8.8	60	160	46	11	7.5
21	3.7	2.7	2.7	2.2	2.2	2.6	9.2	68	198	43	11	7.4
22	3.8	2.9	2.7	2.2	2.1	2.7	9.5	71	216	38	11	7.5
23	3.6	3.0	2.7	2.2	2.1	2.5	8.9	84	200	36	9.9	7.0
24	3.5	3.0	2.6	2.3	2.0	2.4	9.2	101	249	34	9.7	7.0
25	3.5	3.0	2.6	2.4	2.1	2.3	11	112	235	33	9.8	6.9
26	3.5	3.0	2.5	2.3	2.1	2.9	13	103	197	31	9.4	6.7
27	3.5	3.0	2.4	2.3	2.1	4.0	16	98	142	29	9.1	6.6
28	3.5	3.0	2.4	2.2	2.1	5.0	16	90	90	28	8.8	6.5
29	3.4	3.0	2.4	2.1	---	6.0	16	82	85	27	8.5	6.3
30	3.5	3.0	2.4	2.1	---	7.0	16	85	90	25	8.3	6.3
31	3.3	---	2.4	2.1	---	8.0	---	95	---	24	8.8	---
TOTAL	116.9	85.3	84.5	69.5	59.9	85.7	277.8	1606.8	4897	1772	417.3	230.8
MEAN	3.77	2.84	2.73	2.24	2.14	2.76	9.26	51.8	163	57.2	13.5	7.69
MAX	5.0	3.6	2.9	2.5	2.2	8.0	16	112	257	96	23	9.2
MIN	3.3	1.8	2.4	2.1	2.0	1.7	5.2	9.8	85	24	8.3	6.3
AC-FT	232	169	168	138	119	170	551	3190	9710	3510	828	458

CAL YR 1977 TOTAL 3371.4 MEAN 9.24 MAX 68 MIN 1.6 AC-FT 6690
WTR YR 1978 TOTAL 9703.5 MEAN 26.6 MAX 257 MIN 1.7 AC-FT 19250

NOTE.--NO GAGE-HEIGHT RECORD NOV. 22 TO APR. 6.

09063900 MISSOURI CREEK NEAR GOLD PARK, CO

LOCATION.--Lat 39°23'25", long 106°28'10", Eagle County, Hydrologic Unit 14010003, on left bank 50 ft (15 m) downstream from road culvert, 0.6 mi (1.0 km) upstream from Fancy Creek, 2.2 mi (3.5 km) southwest of Gold Park, and 10 mi (16 km) southwest of Red Cliff.

DRAINAGE AREA.--6.42 mi^2 (16.63 km^2).

PERIOD OF RECORD.--August 1972 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,980 ft (3,042 m), from topographic map.

REMARKS.--Records poor. Transmountain diversion above station to Arkansas River basin through Homestake tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 6.80 ft^3/s (0.193 m^3/s) 4,930 acre-ft/yr (6.08 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft^3/s (8.50 m^3/s) July 4, 1975, gage height, 3.19 ft (0.972 m), from rating curve extended above 35 ft^3/s (1.0 m^3/s); minimum daily, 0.24 ft^3/s (0.007 m^3/s) Feb. 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148 ft^3/s (4.19 m^3/s) at 2200 June 24, gage height, 3.24 ft (0.988 m), from crest-stage gage; minimum daily, 0.54 ft^3/s (0.015 m^3/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	1.2	1.0	.78	.76	.64	2.8	3.7	12	37	13	5.2
2	4.4	1.8	1.1	.78	.76	.64	2.9	3.3	13	27	13	5.1
3	4.1	1.8	1.1	.82	.76	.64	2.7	2.5	15	26	12	4.7
4	3.9	1.7	1.1	.84	.76	.64	2.6	1.8	14	21	13	4.8
5	3.7	1.7	1.1	.84	.76	.64	2.5	1.8	10	17	14	4.5
6	3.4	1.7	1.1	.84	.80	.64	2.5	1.7	12	15	14	4.5
7	3.2	1.6	1.1	.84	.80	.64	2.5	1.7	15	14	14	4.8
8	3.3	1.5	1.1	.84	.80	.62	3.0	1.7	15	16	15	4.8
9	2.8	1.5	1.1	.84	.80	.66	4.0	1.7	26	19	14	4.1
10	2.3	1.4	1.1	.82	.82	.66	3.9	2.0	55	21	14	4.0
11	2.7	1.4	1.1	.82	.84	.64	3.5	2.8	62	24	13	4.0
12	3.2	1.4	1.1	.82	.84	.62	3.5	2.8	48	24	13	3.4
13	2.8	1.3	1.1	.82	.80	.58	3.5	3.2	61	16	15	2.7
14	2.3	1.2	1.1	.82	.80	.56	3.2	6.4	63	11	18	2.4
15	2.2	1.2	1.0	.82	.78	.54	3.0	12	71	15	14	2.3
16	2.1	1.1	1.0	.82	.76	.56	3.0	19	65	15	11	2.4
17	1.9	1.1	1.0	.82	.74	.60	3.0	21	42	26	11	2.7
18	1.9	1.1	1.1	.82	.70	.70	3.0	10	32	11	11	2.6
19	1.5	1.1	1.0	.82	.74	.80	2.9	7.2	40	6.8	11	2.6
20	1.4	1.1	.90	.84	.80	.66	2.3	7.2	43	4.2	11	2.6
21	1.5	1.0	.90	.84	.70	.66	2.3	8.2	48	3.9	11	2.4
22	1.5	1.1	.90	.84	.70	.90	2.3	8.0	63	3.1	11	2.1
23	1.4	1.1	.94	.82	.66	.80	2.4	9.8	67	2.4	11	1.9
24	1.4	1.1	.96	.80	.68	.70	2.5	13	80	5.3	11	1.8
25	1.3	1.1	.94	.90	.68	.60	2.9	11	85	11	11	1.7
26	1.3	1.1	.90	.88	.66	.70	4.4	10	50	12	11	1.7
27	1.2	1.1	.86	.84	.66	.90	6.4	11	35	15	11	1.7
28	1.2	1.1	.86	.82	.64	1.1	4.9	8.9	33	15	11	1.6
29	1.2	1.1	.86	.84	---	1.4	4.3	8.8	35	15	11	1.6
30	1.3	1.1	.86	.84	---	1.5	4.0	11	50	14	10	1.5
31	1.1	---	.82	.76	---	1.8	---	12	---	13	7.6	---
TOTAL	71.9	38.8	31.10	25.64	21.00	23.74	96.7	225.2	1260	476.7	380.6	93.2
MEAN	2.32	1.29	1.00	.83	.75	.77	3.22	7.26	42.0	15.4	12.3	3.11
MAX	4.4	1.8	1.1	.90	.84	1.8	6.4	21	85	37	18	5.2
MIN	1.1	1.0	.82	.76	.64	.54	2.3	1.7	10	2.4	7.6	1.5
AC-FT	143	77	62	51	42	47	192	447	2500	946	755	185

CAL YR 1977 TOTAL 1602.87 MEAN 4.39 MAX 64 MIN .24 AC-FT 3180
WTR YR 1978 TOTAL 2744.58 MEAN 7.52 MAX 85 MIN .54 AC-FT 5440

NOTE.--NO GAGE-HEIGHT RECORD OCT. 11 TO MAR. 20.

09064000 HOMESTAKE CREEK AT GOLD PARK, CO

LOCATION.--Lat 39°24'20", long 106°25'58", Eagle County, Hydrologic Unit 14010003, on left bank at Gold Park, 400 ft (120 m) downstream from ford, 0.5 mi (0.8 km) downstream from French Creek, and 8 mi (13 km) southwest of Red Cliff.

DRAINAGE AREA.--36.1 mi² (93.5 km²).

PERIOD OF RECORD.--October 1947 to September 1954, August 1972 to current year.

REVISED RECORDS.--WRD Colo. 1973: Drainage area at former site.

GAGE.--Water-stage recorder. Altitude of gage is 9,200 ft (2,804 m), from topographic map. Prior to Aug. 1, 1972, water-stage recorder at site 1,500 ft (460 m) upstream at datum 9,245 ft (2,817.9 m), National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Homestake Lake, capacity, 44,360 acre-ft (54.7 hm³) since June 7, 1966. Transmountain diversion above station to Arkansas River basin through Homestake tunnel (see elsewhere in this report) since June 6, 1967. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years (water years 1948-54), 63.4 ft³/s (1.795 m³/s), 45,930 acre-ft/yr (56.6 hm³/yr), prior to diversion through Homestake tunnel; 6 years (water years 1973-78), 22.0 ft³/s (0.623 m³/s), 15,940 acre-ft/yr (19.7 hm³/yr), subsequent to diversion through Homestake tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) June 13, 1953, gage height, 6.84 ft (2.085 m), site and datum then in use, from rating curve extended above 700 ft³/s (20 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 639 ft³/s (18.1 m³/s) at 2300 June 15, gage height, 5.75 ft (1.756 m), from rating curve extended above 110 ft³/s (3.1 m³/s); maximum gage height, 6.31 ft (1.923 m) at 0600 Apr. 5 (backwater from ice); minimum daily discharge, 3.9 ft³/s (0.11 m³/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.2	7.7	5.6	4.6	4.5	12	18	79	94	28	20
2	12	11	8.0	5.6	4.5	4.5	13	17	86	63	26	19
3	12	11	8.0	5.6	4.4	4.5	13	18	108	57	25	18
4	11	10	8.0	5.8	4.4	4.5	14	17	100	47	27	18
5	12	10	8.0	6.0	4.6	4.6	12	15	65	38	29	17
6	14	9.6	7.8	5.8	4.7	4.7	11	16	70	35	28	17
7	18	9.6	8.0	5.6	4.7	4.5	13	22	91	32	30	17
8	18	9.6	8.0	5.4	4.6	4.4	16	14	82	35	31	18
9	16	9.6	8.0	5.2	4.6	4.5	18	27	150	43	33	16
10	15	9.6	8.0	5.0	4.6	4.8	15	16	310	48	53	16
11	16	9.6	8.0	5.0	4.7	4.6	12	19	347	52	49	16
12	17	9.6	8.0	5.0	4.9	4.5	14	23	270	53	51	15
13	15	9.6	8.0	5.0	4.9	4.1	14	30	283	41	53	13
14	13	9.6	8.0	5.0	4.6	4.0	14	58	297	31	72	13
15	13	9.6	7.7	5.2	4.6	3.9	16	91	285	37	59	12
16	13	9.0	8.0	5.2	4.6	4.1	19	120	256	40	41	12
17	13	9.0	8.4	5.2	4.5	4.2	19	107	156	60	36	13
18	12	9.0	8.4	5.2	4.3	4.5	16	48	101	33	34	13
19	12	9.0	8.0	5.2	4.6	5.0	14	45	123	23	28	13
20	12	9.0	7.5	5.2	4.7	4.8	15	62	131	19	26	14
21	12	9.0	7.0	5.2	4.6	5.0	18	84	134	19	26	13
22	12	8.6	7.0	5.2	4.5	5.4	16	83	193	17	28	13
23	11	8.0	7.0	5.2	4.5	5.0	12	90	212	16	27	12
24	11	8.0	7.0	5.2	4.5	4.8	13	105	249	19	26	11
25	10	8.0	7.0	5.4	4.5	4.8	17	89	269	24	25	11
26	10	8.0	6.6	5.4	4.5	4.8	26	74	135	23	23	11
27	9.9	8.0	6.4	5.6	4.5	5.0	31	75	91	31	21	11
28	9.7	8.0	6.2	5.4	4.5	5.6	23	59	83	32	20	11
29	9.4	8.0	6.0	5.2	---	7.0	19	61	84	31	19	10
30	9.7	8.0	5.8	4.8	---	8.0	19	75	115	30	18	10
31	9.3	---	5.6	4.7	---	11	---	78	---	27	19	---
TOTAL	390.0	273.8	231.1	164.1	128.2	155.6	484	1656	4955	1150	1021	423
MEAN	12.6	9.13	7.45	5.29	4.58	5.02	16.1	53.4	165	37.1	32.9	14.1
MAX	18	11	8.4	6.0	4.9	11	31	120	347	94	72	20
MIN	9.3	8.0	5.6	4.7	4.3	3.9	11	14	65	16	18	10
AC-FT	774	543	458	325	254	309	960	3280	9830	2280	2030	839

CAL YR 1977 TOTAL 5759.6 MEAN 15.8 MAX 131 MIN 3.1 AC-FT 11420
WTR YR 1978 TOTAL 11031.8 MEAN 30.2 MAX 347 MIN 3.9 AC-FT 21880

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO MAR. 21.

09064500 HOMESTAKE CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°28'24", long 106°22'02", in NE¼NE¼ sec.6, T.7 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank at downstream side of Forest Service road bridge, 2.4 mi (3.9 km) south of Red Cliff, and 3.0 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--58.3 mi² (151.0 km²).

PERIOD OF RECORD.--October 1910 to September 1918, May 1944 to current year. Published as "at Redcliff" October 1910 to September 1916.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,783 ft (2,677.1 m) National Geodetic Vertical Datum of 1929 (river-profile survey). See WSP 1713 or 1733 for history of changes prior to May 8, 1961.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Homestake Lake (capacity, 44,360 acre-ft or 54.7 hm³) since June 7, 1966. Transmountain diversions above station through Homestake tunnel (see elsewhere in this report) since June 6, 1967. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years (water years 1911-18, 1945-66), 86.6 ft³/s (2.453 m³/s), 62,740 acre-ft/yr (77.4 hm³/yr), prior to diversion through Homestake tunnel; 12 years (water years 1967-78), 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 hm³/yr), subsequent to diversion through Homestake tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,300 ft³/s (36.8 m³/s) June 24, 1918, gage height, 6.2 ft (1.18 m), site and datum then in use; minimum observed, 0.60 ft³/s (0.017 m³/s) Jan. 25, 1915 (discharge measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft³/s (13.6 m³/s) at 2400 June 10, gage height, 3.28 ft (1.000 m); minimum daily, 6.0 ft³/s (0.170 m³/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	10	9.6	7.0	6.6	6.6	36	69	157	137	38	28
2	14	14	10	6.8	6.6	6.6	41	67	164	105	37	24
3	13	14	10	7.0	6.6	6.6	41	73	193	94	33	24
4	13	13	10	7.8	6.6	6.6	44	67	193	83	34	22
5	14	13	10	7.8	6.8	6.8	42	56	145	72	36	21
6	19	13	9.8	7.4	7.0	7.0	37	49	141	64	35	21
7	37	12	10	7.2	7.0	6.6	43	46	172	58	34	21
8	32	12	10	7.0	7.0	6.6	57	40	156	57	37	23
9	27	12	10	6.8	7.0	7.0	60	43	207	62	37	20
10	26	12	10	6.8	7.0	7.0	47	54	318	70	53	20
11	20	12	10	6.6	7.0	6.8	44	74	369	66	53	21
12	19	13	10	6.6	7.2	6.2	52	85	317	68	53	19
13	20	12	10	6.6	7.2	6.2	52	96	316	57	62	18
14	19	12	10	6.6	7.0	6.2	52	141	338	48	69	17
15	19	12	9.6	6.8	7.0	6.0	59	200	333	47	68	16
16	18	11	10	6.8	7.0	6.2	60	252	328	59	50	15
17	18	11	11	6.8	7.0	6.2	59	234	247	69	43	15
18	17	11	11	6.8	6.6	7.4	49	133	189	52	41	17
19	17	11	10	6.8	7.2	8.4	43	120	197	39	36	18
20	16	11	9.0	7.0	7.2	8.2	44	142	207	35	33	19
21	16	10	9.0	7.0	7.0	8.0	50	185	197	32	32	18
22	17	9.4	9.0	7.0	6.8	9.0	47	172	236	30	35	18
23	16	10	9.2	7.0	6.8	8.4	40	184	251	27	35	17
24	15	10	9.4	7.0	6.8	8.0	48	211	258	26	33	16
25	14	10	9.0	7.4	6.8	7.6	65	193	289	33	32	15
26	14	10	8.4	7.6	6.6	7.4	89	162	200	29	31	15
27	13	10	8.0	7.8	6.6	7.8	106	166	149	38	29	14
28	13	10	7.8	7.4	6.6	8.6	89	143	138	43	27	14
29	12	10	7.8	7.0	---	9.6	75	130	135	43	26	14
30	13	10	7.6	6.8	---	15	76	152	148	41	25	13
31	12	---	7.2	6.6	---	25	---	161	---	37	24	---
TOTAL	548	340.4	292.4	217.6	192.6	249.6	1647	3900	6688	1721	1211	553
MEAN	17.7	11.3	9.43	7.02	6.88	8.05	54.9	126	223	55.5	39.1	18.4
MAX	37	14	11	7.8	7.2	25	106	252	369	137	69	28
MIN	12	9.4	7.2	6.6	6.6	6.0	36	40	135	26	24	13
AC-FT	1090	675	580	432	382	495	3270	7740	13270	3410	2400	1100

CAL YR 1977 TOTAL 7711.0 MEAN 21.1 MAX 141 MIN 3.0 AC-FT 15290
WTR YR 1978 TOTAL 17560.6 MEAN 48.1 MAX 369 MIN 6.0 AC-FT 34830

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO MAR. 21.

09065100 CROSS CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°34'05", long 106°24'45", in SW¼ sec.36, T.5 S., R.81 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.4 mi (0.6 km) upstream from mouth and 1.5 mi (2.4 km) southeast of Minturn.

DRAINAGE AREA.--33.5 mi^2 (86.8 km^2).

PERIOD OF RECORD.--May 1956 to September 1963, October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,990 ft (2,435 m), from topographic map. Prior to July 18, 1956, nonrecording gage at site 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Bolts ditch exports water from above station to tailings ponds and recreation lake along Eagle River. Diversion above station for water supply of school 0.2 mi (0.3 km) above station and for municipal supply of Minturn. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years, 50.0 ft^3/s (1.416 m^3/s), 36,220 acre-ft/yr (44.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 754 ft^3/s (21.4 m^3/s) June 30, 1957, gage height, 5.45 ft (1.661 m); maximum gage height, 5.54 ft (1.689 m) July 18, 1957; minimum daily discharge, 0.1 ft^3/s (0.003 m^3/s) Dec. 27-31, 1962, Jan. 6-8, 11-15, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 606 ft^3/s (17.2 m^3/s) at 0500 June 16, gage height, 5.14 ft (1.567 m), only peak aobve base of 400 ft^3/s (11 m^3/s); minimum daily, 2.8 ft^3/s (0.079 m^3/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.5	4.2	3.7	3.0	3.2	31	35	151	364	83	19
2	10	10	4.4	3.4	3.0	3.2	33	32	167	294	80	17
3	9.3	12	4.3	3.4	3.0	3.2	28	35	188	302	70	16
4	8.8	9.3	4.3	3.6	3.0	3.2	28	32	209	286	63	15
5	9.5	7.6	4.3	3.6	3.0	3.2	25	28	156	244	57	15
6	14	7.3	4.2	3.6	3.1	3.2	22	23	140	234	53	14
7	31	7.4	4.2	3.5	3.2	3.2	28	23	196	214	51	17
8	23	7.4	4.3	3.5	3.2	3.3	38	18	181	222	52	35
9	18	9.7	4.3	3.4	3.2	3.3	42	24	247	246	52	25
10	16	8.2	4.3	3.4	3.2	3.4	33	26	396	282	50	20
11	11	15	4.2	3.4	3.2	3.3	28	39	461	248	49	26
12	12	13	4.2	3.4	3.2	3.1	33	43	434	268	51	22
13	12	18	4.2	3.4	3.2	3.1	33	51	473	234	57	17
14	13	16	4.2	3.4	3.2	2.9	32	84	486	198	62	14
15	13	4.7	4.1	3.4	3.2	2.8	37	121	491	200	66	12
16	12	4.5	4.1	3.4	3.2	3.0	40	156	503	229	49	11
17	12	4.1	4.5	3.4	3.0	3.5	38	157	422	297	40	11
18	12	4.3	4.4	3.4	3.3	4.6	34	111	357	233	37	14
19	11	4.3	4.1	3.5	3.5	5.7	28	94	358	174	33	15
20	11	4.3	3.8	3.5	3.3	5.2	29	106	354	145	28	16
21	11	4.3	4.0	3.5	3.2	5.8	30	134	367	154	27	14
22	11	4.4	4.0	3.5	3.2	5.0	28	127	422	138	28	13
23	10	4.4	4.0	3.5	3.2	4.7	23	143	458	114	30	12
24	9.4	4.4	4.0	3.3	3.2	4.9	23	175	465	107	28	10
25	8.9	4.4	3.8	3.6	3.2	8.2	34	177	496	104	26	9.5
26	8.6	4.4	3.8	3.5	3.2	5.1	47	151	442	98	26	8.8
27	8.2	4.4	3.8	3.4	3.2	15	55	160	361	96	23	8.1
28	7.8	4.4	3.8	3.3	3.2	12	48	135	369	96	21	7.7
29	7.3	4.3	3.8	3.2	---	13	40	111	336	96	18	7.0
30	7.7	4.2	3.8	3.1	---	18	40	131	353	94	17	6.5
31	7.4	---	3.8	3.0	---	23	---	150	---	83	16	---
TOTAL	366.9	218.2	127.2	106.2	88.8	184.3	1008	2832	10439	6094	1343	447.6
MEAN	11.8	7.27	4.10	3.43	3.17	5.95	33.6	91.4	348	197	43.3	14.9
MAX	31	18	4.5	3.7	3.5	23	55	177	503	364	83	35
MIN	7.3	4.1	3.8	3.0	3.0	2.8	22	18	140	83	16	6.5
AC-FT	728	433	252	211	176	366	2000	5620	20710	12090	2660	888

CAL YR 1977 TOTAL 9472.40 MEAN 26.0 MAX 297 MIN .13 AC-FT 18790
WTR YR 1978 TOTAL 23255.20 MEAN 63.7 MAX 503 MIN 2.8 AC-FT 46130

09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO

LOCATION.--Lat 39°37'40", long 106°16'24", in NE¼NW¼ sec.18, T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on left bank 100 ft (30 m) downstream from bridge on U.S. Highway 6, 0.4 mi (0.6 km) upstream from Black Gore Creek, 4.5 mi (7.2 km) east of Vail, and 8.5 mi (13.7 km) northeast of Minturn.

DRAINAGE AREA.--14.3 mi² (37.0 km²).

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,675 ft (2,644 m), from topographic map. Prior to Aug. 26, 1952, at present site; Aug. 26, 1952, to Sept. 30, 1956, at site 20 ft (6 m) downstream; and Oct. 1, 1963, to Sept. 30, 1971, at site 40 ft (12 m) downstream; all at datum 1.45 ft (0.442 m) lower. Oct. 1, 1971, to June 9, 1972, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 588 ft³/s (16.7 m³/s) June 10, 1952, gage height, 6.58 ft (2.006 m), datum then in use, from rating curve extended above 260 ft³/s (7.4 m³/s); maximum gage height, 6.65 ft (2.027 m), June 18, 1951, datum then in use; minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Mar. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 10	2230	*515	14.6	3.58	1.090	June 25	2315	465	13.2	3.44	1.049

Minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	7.9	4.0	3.0	3.0	4.0	17	20	122	305	55	12
2	8.4	9.8	4.0	3.0	2.9	4.0	12	20	135	287	53	12
3	8.2	8.7	3.5	3.0	2.9	4.1	11	21	147	245	48	12
4	7.9	8.7	3.0	3.0	2.8	4.4	11	22	157	242	42	11
5	7.6	8.7	3.0	3.0	2.8	4.3	11	21	125	215	39	11
6	10	8.7	3.0	3.0	2.8	4.3	11	18	143	192	37	10
7	14	8.2	3.0	3.0	2.8	4.3	13	17	200	180	36	10
8	13	7.3	3.0	3.0	2.8	4.1	15	16	188	178	36	10
9	11	7.0	3.0	3.0	2.8	3.5	16	16	236	190	33	10
10	12	6.0	3.0	3.0	2.8	3.0	14	17	365	170	33	11
11	9.8	5.0	3.2	3.0	2.8	3.5	13	21	329	180	31	12
12	10	4.6	3.2	3.0	2.8	4.0	14	21	309	185	31	12
13	11	4.1	3.2	3.0	2.8	4.0	15	24	290	163	30	9.8
14	11	4.1	3.0	3.0	2.8	4.0	15	38	313	139	33	8.7
15	11	3.8	2.9	3.0	2.8	4.0	16	65	329	124	34	8.4
16	11	3.5	2.9	3.0	2.8	4.0	17	102	293	125	27	7.9
17	11	3.2	3.2	3.0	2.0	4.0	16	111	251	147	24	9.0
18	11	3.6	3.0	3.0	2.0	4.0	13	87	227	127	24	9.2
19	11	4.0	3.0	3.0	2.5	4.0	13	70	215	111	20	8.7
20	10	4.0	3.0	3.0	3.0	4.0	14	72	218	104	18	9.2
21	10	4.0	3.0	3.0	3.5	4.0	14	83	248	101	19	9.5
22	11	4.3	2.9	3.0	3.6	4.0	13	73	257	98	21	10
23	11	4.3	3.0	3.0	3.6	4.0	13	96	299	90	19	9.2
24	9.8	4.3	3.0	2.9	3.6	4.0	14	116	309	86	18	8.4
25	9.2	4.3	3.0	2.9	3.6	4.0	15	120	299	81	18	7.9
26	9.0	4.6	3.0	2.9	3.6	4.0	17	111	248	72	17	7.6
27	8.7	4.4	3.0	3.0	4.0	4.0	20	108	245	72	16	7.3
28	8.4	4.3	3.0	3.0	4.0	4.5	22	96	275	70	14	7.1
29	8.4	4.1	3.0	3.0	---	6.0	20	94	275	68	13	6.8
30	8.4	4.0	3.0	3.0	---	8.0	20	118	305	70	13	6.8
31	8.2	---	3.0	3.0	---	10	---	122	---	61	12	---
TOTAL	309.7	163.5	96.0	92.7	84.2	136.0	445	1936	7352	4478	854	284.5
MEAN	9.99	5.45	3.10	2.99	3.01	4.39	14.8	62.5	245	144	27.9	9.48
MAX	14	9.8	4.0	3.0	4.0	10	22	122	365	305	55	12
MIN	7.6	3.2	2.9	2.9	2.0	3.0	11	16	122	61	12	6.8
AC-FT	614	324	190	184	167	270	883	3840	14580	8880	1710	564

CAL YR 1977 TOTAL 6454.2 MEAN 17.7 MAX 182 MIN 1.2 AC-FT 12800
WTR YR 1978 TOTAL 16241.6 MEAN 44.5 MAX 365 MIN 2.0 AC-FT 32220

NOTE.--NO GAGE-HEIGHT RECORD DEC. 23 TO JAN. 24.

09066000 BLACK GORE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°35'47", long 106°15'52", Eagle County, Hydrologic Unit 14010003, on right bank 200 ft (61 m) from U.S. Highway 6, 0.3 mi (0.5 km) upstream from Timber Creek, 2.5 mi (4.0 km) upstream from mouth, and 9 mi (14 km) east of Minturn.

DRAINAGE AREA.--11.8 mi² (30.6 km²).

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,150 ft (2,789 m), from topographic map. Prior to October 1963, at site 15 ft (5 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Natural regulation by two small recreation lakes above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 16.5 ft³/s (0.467 m³/s), 11,950 acre-ft/yr (14.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) June 7, 1952, gage height, 5.42 ft (1.652 m); maximum gage height, 6.00 ft (1.829 m) Mar. 30, 1968 (backwater from ice); minimum daily discharge, 0.90 ft³/s (0.025 m³/s) Feb. 22, 1968, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s (9.06 m³/s) at 2030 June 15, gage height, 4.42 ft (1.347 m), only peak above base of 150 ft³/s (4.2 m³/s); minimum daily, 1.2 ft³/s (0.034 m³/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.0	1.6	1.6	2.0	1.6	11	13	90	96	16	6.4
2	3.0	2.5	1.6	1.6	2.0	1.6	9.5	13	102	87	15	5.5
3	3.2	2.7	1.6	1.6	2.0	1.6	9.0	15	108	78	15	5.5
4	3.2	2.9	1.6	1.7	2.0	1.6	8.5	15	110	73	14	5.5
5	3.6	2.9	1.6	2.0	2.0	1.6	9.0	13	90	68	13	5.3
6	3.6	2.5	1.6	2.0	2.0	1.6	8.5	12	96	63	12	5.1
7	5.3	2.5	1.6	2.0	2.0	1.6	10	10	114	57	12	4.9
8	4.4	2.0	1.6	2.0	2.0	1.6	11	9.6	114	54	11	4.9
9	4.0	1.5	1.6	2.0	2.0	1.6	13	12	143	57	11	4.7
10	3.8	2.5	1.6	2.0	2.0	1.6	11	13	200	53	11	4.9
11	3.5	2.5	1.6	2.0	2.0	1.6	10	15	230	49	10	5.3
12	4.0	2.5	1.6	2.0	2.0	1.8	11	15	220	45	10	4.7
13	4.0	2.5	1.6	2.0	1.7	1.8	12	17	220	41	10	4.4
14	3.5	2.5	1.6	2.0	1.5	1.8	12	29	228	39	12	4.4
15	3.2	2.5	1.6	2.0	1.5	1.8	12	50	245	36	12	4.2
16	3.1	2.5	1.6	2.0	1.5	1.8	13	74	248	34	10	4.2
17	2.8	2.5	1.6	2.0	1.2	1.8	14	71	212	36	9.6	4.7
18	2.6	2.5	1.6	2.0	1.2	1.8	11	47	200	31	9.6	4.4
19	2.6	2.3	1.6	2.0	1.5	1.9	10	42	188	30	9.6	4.7
20	2.6	2.0	1.6	2.0	1.6	2.0	9.6	52	178	28	9.2	5.1
21	2.8	2.0	1.6	2.0	1.6	2.1	10	62	180	25	8.8	4.2
22	3.0	2.0	1.6	2.0	1.6	2.3	10	62	180	23	9.6	4.2
23	2.8	2.0	1.6	2.0	1.6	2.4	9.6	80	175	22	9.2	3.8
24	2.6	2.0	1.6	2.0	1.6	2.3	10	98	173	21	8.8	3.6
25	2.5	2.0	1.6	2.0	1.6	2.0	15	100	158	19	8.4	3.6
26	2.5	2.0	1.6	2.0	1.6	2.0	19	92	138	19	7.5	3.6
27	2.4	2.0	1.6	2.0	1.6	2.5	24	87	128	17	6.7	3.6
28	2.4	2.0	1.6	2.0	1.6	3.5	20	76	118	17	6.4	3.4
29	2.4	2.0	1.6	2.0	---	5.0	17	71	110	18	6.4	3.2
30	2.5	2.0	1.6	2.0	---	7.0	15	83	106	19	6.1	3.2
31	2.5	---	1.6	2.0	---	10	---	90	---	17	6.4	---
TOTAL	97.8	68.3	49.6	60.5	48.5	75.4	364.7	1438.6	4802	1272	316.3	135.2
MEAN	3.15	2.28	1.60	1.95	1.73	2.43	12.2	46.4	160	41.0	10.2	4.51
MAX	5.3	2.9	1.6	2.0	2.0	10	24	100	248	96	16	6.4
MIN	2.4	1.5	1.6	1.6	1.2	1.6	8.5	9.6	90	17	6.1	3.2
AC-FT	194	135	98	120	96	150	723	2850	9520	2520	627	268

CAL YR 1977 TOTAL 3293.9 MEAN 9.02 MAX 70 MIN 1.5 AC-FT 6530
WTR YR 1978 TOTAL 8728.9 MEAN 23.9 MAX 248 MIN 1.2 AC-FT 17310

NOTE.--NO GAGE-HEIGHT RECORD NOV. 15 TO APR. 13.

09066050 BLACK GORE CREEK NEAR VAIL, CO

LOCATION.--Lat 39°37'26" (revised), long 106°16'47", in SW¼NE¼ sec.18, T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on left bank 600 ft (183 m) upstream from mouth, 1.9 mi (3.1 km) downstream from mouth of Timber Creek, and 5.4 mi (8.7 km) southeast of Vail. Prior to Oct. 1, 1976, at site 200 ft (61 m) upstream.

DRAINAGE AREA.--19.6 mi² (50.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,570 ft (2,612 m), from topographic map. Prior to Oct. 1, 1976, water-stage recorder at site 200 ft (61 m) upstream at datum 7.33 ft (2.234 m) higher.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are poor. No diversion above station. Natural regulation by two small recreation lakes above station.

AVERAGE DISCHARGE.--5 years; 27.1 ft³/s (0.767 m³/s), 19,630 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 422 ft³/s (12.0 m³/s) June 15, 1978, gage height, 3.77 ft (1.149 m); minimum daily, 2.3 ft³/s (0.065 m³/s) Feb. 22, 1975, Apr. 2, 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 422 ft³/s (12.0 m³/s) at 2100 June 15, gage height, 3.77 ft (1.149 m), only peak above base of 250 ft³/s (7.1 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	6.2	4.0	3.5	3.5	3.8	20	26	142	166	25	9.7
2	5.9	4.8	4.0	3.5	3.5	3.8	18	26	150	159	23	8.9
3	6.0	5.8	4.0	3.5	3.5	3.8	17	26	159	152	22	8.9
4	6.2	7.0	4.0	3.5	3.5	3.8	15	23	166	142	21	8.7
5	6.8	6.9	4.0	3.5	3.5	3.8	16	21	148	132	21	8.5
6	7.6	6.0	4.0	3.5	3.5	3.8	15	19	159	125	21	8.3
7	11	5.0	4.0	3.5	3.5	3.8	19	18	182	112	20	8.3
8	8.8	4.0	4.0	3.5	3.5	3.8	21	17	184	105	20	8.4
9	8.2	4.0	4.0	3.5	3.5	3.8	23	20	222	104	19	7.9
10	8.2	4.0	4.0	3.5	3.5	4.0	20	22	282	98	19	8.2
11	8.2	4.0	4.0	3.5	3.5	4.0	18	24	298	90	18	8.7
12	8.5	4.1	4.0	3.5	3.5	4.0	20	24	306	84	18	8.3
13	7.9	4.3	4.0	3.5	3.2	4.0	16	29	322	76	17	7.7
14	7.5	3.9	4.0	3.5	3.2	4.0	18	47	334	70	17	7.6
15	7.5	4.3	4.0	3.5	3.2	4.0	18	74	342	66	16	7.4
16	7.5	4.0	4.0	3.5	3.2	4.0	22	96	338	61	16	7.2
17	7.6	4.0	4.0	3.5	2.5	4.0	26	95	306	60	15	7.7
18	7.3	4.0	4.0	3.5	2.5	4.0	20	71	282	53	14	7.7
19	7.1	4.0	4.0	3.5	3.5	4.5	18	66	264	50	14	7.9
20	7.1	4.0	4.0	3.5	3.8	4.5	20	76	252	46	13	8.3
21	7.4	4.0	4.0	3.5	3.8	4.5	21	88	255	43	13	7.9
22	8.2	4.0	4.0	3.5	3.8	4.5	21	88	261	39	13	8.1
23	7.6	4.0	4.0	3.5	3.8	5.4	19	144	264	37	13	7.6
24	7.1	4.0	4.0	3.5	3.8	5.3	21	138	261	35	12	7.1
25	7.0	4.0	4.0	3.5	3.8	5.1	26	140	255	33	13	5.8
26	6.8	4.0	4.0	3.5	3.8	5.5	31	136	228	31	12	6.8
27	6.9	4.0	4.0	3.5	3.8	8.0	34	136	213	29	11	6.7
28	6.7	4.0	4.0	3.5	3.8	9.5	30	120	199	28	10	6.5
29	6.8	4.0	4.0	3.5	---	10	28	112	189	28	10	6.5
30	7.2	4.0	4.0	3.5	---	15	28	130	192	29	9.8	6.4
31	6.8	---	4.0	3.5	---	18	---	138	---	26	9.6	---
TOTAL	229.5	134.3	124.0	108.5	97.5	170.0	639	2190	7155	2309	495.4	234.7
MEAN	7.40	4.48	4.00	3.50	3.48	5.48	21.3	70.6	239	74.5	16.0	7.82
MAX	11	7.0	4.0	3.5	3.8	18	34	144	342	166	25	9.7
MIN	5.9	3.9	4.0	3.5	2.5	3.8	15	17	142	26	9.6	6.4
AC-FT	455	266	246	215	193	337	1270	4340	14190	4580	983	466

CAL YR 1977 TOTAL 5348.6 MEAN 14.7 MAX 93 MIN 2.3 AC-FT 10610
WTR YR 1978 TOTAL 13886.9 MEAN 38.0 MAX 342 MIN 2.5 AC-FT 27540

NOTE.--NO GAGE-HEIGHT RECORD NOV. 16 TO MAR. 21.

09066050 BLACK GORE CREEK NEAR VAIL, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1973 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to current year.

INSTRUMENTATION.--Pumping sediment sampler since October 1973.

REMARKS.--Daily sediment records not available at time of publication. Will be published with 1979 records.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 1,720 mg/L May 30, 1974; minimum daily, 1 mg/L May 2, July 29, Aug. 2, 1974, many days during winter months in 1977.
SEDIMENT LOADS: Maximum daily, 1,290 tons (1,170 t) May 30, 1974; minimum daily, 0.01 ton (0.01 t) many days during winter months in 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV										
10...	1100	E4.0	220	7.6	.5	110	38	4.6	3.2	127
FEB										
21...	1500	E4.0	230	8.0	.0	110	37	4.5	3.7	117
MAR										
14...	1300	E3.8	260	8.0	.0	120	39	4.8	14	134
APR										
12...	1455	E12	240	7.4	3.0	97	32	4.1	10	117
16...	1505	E16	216	7.4	3.5	110	36	4.1	12	119
27...	1500	20	196	7.4	4.5	90	30	3.7	7.6	102
MAY										
03...	1315	22	220	8.4	5.0	97	33	3.5	6.9	113
08...	1200	13	220	8.0	2.0	99	34	3.5	7.0	107
24...	1000	125	130	8.2	5.0	63	20	3.2	2.6	76
31...	1400	104	122	8.1	4.0	88	31	2.6	1.8	72
JUN										
05...	1115	116	126	8.0	5.0	57	19	2.4	1.2	57
13...	1200	53	95	8.0	6.0	63	22	2.0	.7	59
22...	1300	204	85	7.9	8.0	51	16	2.7	1.0	59
JUL										
26...	1100	32	160	8.6	10.0	77	26	3.0	1.4	80
SEP										
07...	1240	5.5	203	8.4	11.0	100	35	3.7	4.6	111
27...	1200	6.6	200	7.6	7.0	110	37	4.0	3.3	114

E ESTIMATED.

09066100 BIGHORN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'24", long 106°17'34", in N½ sec.12, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.3 mi (0.5 km) upstream from U.S. Highway 6, 0.4 mi (0.6 km) upstream from mouth, 4.5 mi (7.2 km) east of Vail, and 8.5 mi (13.7 km) northeast of Minturn.

DRAINAGE AREA.--4.37 mi² (11.32 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,625 ft (2,629 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 8.27 ft³/s (0.234 m³/s), 5,990 acre-ft/yr (7.39 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225 ft³/s (6.37 m³/s) June 10, 1973, gage height, 3.82 ft (1.164 m), from rating curve extended above 82 ft³/s (2.3 m³/s); minimum daily determined, 0.10 ft³/s (0.003 m³/s) Feb. 8, 1967, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 17	0800	54	1.53	3.15	0.960	June 15	2300	*212	6.12	3.59	1.094

Minimum daily discharge, 0.55 ft³/s (0.016 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.8	1.2	.60	.60	.70	6.0	6.0	45	54	11	3.8
2	2.6	1.8	1.2	.60	.60	.70	5.5	6.0	53	54	11	3.8
3	2.6	1.9	1.2	.60	.60	.70	4.5	6.2	58	50	9.9	3.4
4	2.6	1.9	1.1	.60	.60	.70	4.5	6.4	56	47	9.3	3.4
5	2.6	1.9	1.0	.60	.60	.70	4.5	6.0	50	44	8.6	3.4
6	3.0	1.9	.85	.60	.60	.70	5.0	5.6	50	44	8.6	3.5
7	3.7	1.7	.70	.60	.60	.70	6.0	5.0	66	42	8.3	3.7
8	3.2	1.6	.60	.60	.60	.70	6.5	4.8	72	39	9.6	3.4
9	3.2	1.4	.60	.60	.60	.70	6.5	4.8	92	38	8.3	3.4
10	3.2	1.8	.60	.60	.60	.70	6.0	5.4	156	32	8.6	3.4
11	2.7	1.7	.60	.60	.60	.70	5.0	6.6	131	38	7.8	3.5
12	3.0	1.6	.60	.60	.60	.70	5.5	7.3	128	38	7.6	3.1
13	3.0	1.5	.60	.60	.60	.70	5.8	8.3	140	34	8.0	2.7
14	3.0	1.4	.60	.60	.60	.80	5.2	13	125	30	9.0	2.5
15	3.1	1.3	.60	.60	.60	.90	5.2	24	122	27	8.0	2.4
16	3.2	1.2	.60	.60	.60	1.0	5.4	39	137	26	6.0	2.6
17	3.2	1.1	.60	.60	.55	1.0	6.0	47	113	28	6.4	3.0
18	3.2	1.1	.60	.60	.60	1.0	5.4	32	97	26	6.6	3.1
19	3.1	1.2	.60	.60	.65	1.0	5.0	26	92	23	4.5	3.0
20	3.0	1.1	.60	.60	.70	1.0	4.8	29	84	20	4.8	3.0
21	3.0	1.2	.60	.60	.70	1.0	5.0	33	89	20	5.4	2.7
22	3.0	1.3	.60	.60	.70	1.0	5.0	32	89	18	6.2	3.0
23	2.8	1.3	.60	.70	.70	1.0	4.7	36	78	16	5.8	3.0
24	2.5	1.3	.60	.70	.70	1.0	4.7	48	76	15	5.6	2.7
25	2.5	1.2	.60	.70	.70	1.0	5.4	51	76	15	5.0	2.6
26	2.4	1.3	.60	.70	.70	1.3	7.4	44	61	14	4.8	2.6
27	2.1	1.2	.60	.70	.70	1.5	8.0	42	56	14	4.5	2.6
28	2.1	1.2	.60	.60	.70	2.0	7.4	38	54	14	4.5	2.7
29	1.9	1.2	.60	.60	---	2.5	6.5	35	53	16	4.2	2.6
30	2.0	1.2	.60	.60	---	3.5	6.0	40	58	16	3.8	2.6
31	2.0	---	.60	.60	---	4.5	---	43	---	12	4.0	---
TOTAL	86.2	43.3	21.65	19.10	17.70	36.10	168.4	730.4	2557	904	215.9	91.2
MEAN	2.78	1.44	.70	.62	.63	1.16	5.61	23.6	85.2	29.2	6.96	3.04
MAX	3.7	1.9	1.2	.70	.70	4.5	8.0	51	156	54	11	3.8
MIN	1.9	1.1	.60	.60	.55	.70	4.5	4.8	45	12	3.8	2.4
AC-FT	171	86	43	38	35	72	334	1450	5070	1790	428	181

CAL YR 1977 TOTAL 2089.40 MEAN 5.72 MAX 50 MIN .35 AC-FT 4140
WTR YR 1978 TOTAL 4890.95 MEAN 13.4 MAX 156 MIN .55 AC-FT 9700

NOTE.--NO GAGE-HEIGHT RECORD NOV. 5 TO MAR. 23.

09066150 PITKIN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'37", long 106°18'07", in SW¼SW¼ sec.1, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 100 ft (30 m) downstream from Pitkin ditch headgate, 1,000 ft (300 m) upstream from U.S. Highway 6, 1,200 ft (370 m) upstream from mouth, 4.0 mi (6.4 km) east of Vail, and 8 mi (13 km) northeast of Minturn.

DRAINAGE AREA.--5.39 mi^2 (13.96 km^2).

PERIOD OF RECORD.--Annual maximum and occasional low-flow measurements water year 1965-66. October 1966 to current year.

REVISED RECORDS.--WRD Colo. 1971: 1967-70.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,525 ft (2,598 m), from topographic map. Oct. 1, 1964, to Sept. 30, 1966, crest-stage gage at datum 0.98 ft (0.299 m) lower.

REMARKS.--Records fair except those for winter period, which are poor. Diversions above station by Pitkin ditch for irrigation downstream. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 10.5 ft^3/s (0.297 m^3/s), 7,610 acre-ft/yr (9.38 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 221 ft^3/s (6.26 m^3/s) June 15, 1978, gage height, 2.55 ft (0.777 m); maximum gage height, 2.79 ft (0.850 m) June 20, 1968; minimum daily discharge, 0.24 ft^3/s (0.007 m^3/s) Oct. 29 to Nov. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft^3/s (1.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 15	2000	*221	6.26	2.55	0.777	June 24	2115	212	6.00	2.53	0.771

Maximum daily discharge, 1.2 ft^3/s (0.034 m^3/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.4	1.8	1.9	1.5	1.4	5.0	6.4	37	83	17	6.4
2	4.0	3.2	1.8	1.9	1.5	1.4	4.5	6.7	38	70	16	6.0
3	4.0	3.4	1.9	1.9	1.5	1.4	4.5	6.7	38	70	14	6.0
4	4.0	3.6	1.9	1.9	1.5	1.4	4.5	7.1	37	63	13	5.6
5	3.8	3.6	1.9	1.9	1.5	1.4	4.5	7.1	38	58	13	5.3
6	4.0	3.2	1.9	1.9	1.5	1.4	4.5	7.4	37	51	13	5.3
7	5.3	3.2	1.9	1.9	1.5	1.4	5.0	7.1	38	51	13	5.6
8	5.6	3.0	1.9	1.9	1.5	1.4	5.3	7.1	43	54	13	5.3
9	5.6	2.6	1.9	1.9	1.5	1.4	5.3	6.7	61	40	12	4.9
10	5.6	2.8	1.9	1.9	1.5	1.4	5.3	7.1	142	38	11	4.6
11	4.9	2.8	1.9	1.9	1.5	1.4	5.3	7.8	172	40	11	4.9
12	5.3	2.4	1.9	1.9	1.5	1.5	5.3	9.0	168	40	10	4.9
13	5.6	2.2	1.9	1.9	1.5	1.7	5.3	10	172	40	10	4.9
14	5.6	2.0	1.9	1.9	1.5	1.7	5.3	15	186	40	12	4.2
15	5.6	2.0	1.9	1.9	1.5	1.7	5.3	30	181	37	11	4.0
16	5.6	1.9	1.9	1.9	1.5	1.7	4.9	35	110	34	10	3.8
17	5.6	1.9	1.9	1.9	1.2	1.7	4.9	30	139	30	9.7	4.0
18	5.6	1.9	1.9	1.9	1.2	1.7	4.9	25	117	28	9.7	4.2
19	5.6	1.9	1.9	1.9	1.4	1.7	4.9	25	110	27	8.4	4.2
20	5.6	1.9	1.9	1.9	1.4	1.7	4.9	25	101	27	7.8	4.2
21	5.3	1.9	1.9	1.9	1.4	1.7	4.9	30	83	28	7.8	4.2
22	4.9	1.9	1.9	1.9	1.4	1.7	4.9	30	117	27	7.8	4.6
23	4.9	2.0	1.9	1.9	1.4	1.7	4.9	31	128	23	7.4	4.6
24	4.9	2.0	1.9	1.9	1.4	1.7	4.9	37	177	21	7.4	4.6
25	4.2	1.9	1.9	1.9	1.4	1.7	4.9	37	110	20	7.1	4.2
26	4.0	1.9	1.9	1.9	1.4	2.0	5.3	42	110	22	7.1	4.2
27	4.0	1.9	1.9	1.9	1.4	2.5	6.0	42	92	21	6.7	3.8
28	4.0	1.9	1.9	1.5	1.4	3.0	6.0	35	83	22	6.7	3.8
29	3.8	1.9	1.9	1.5	---	3.5	6.4	31	83	22	6.7	3.8
30	3.6	1.8	1.9	1.5	---	4.0	6.4	35	75	22	6.4	3.6
31	3.6	---	1.9	1.5	---	4.5	---	35	---	19	6.4	---
TOTAL	148.1	72.0	58.7	57.3	40.4	58.5	154.0	666.2	3023	1168	312.1	139.7
MEAN	4.78	2.40	1.89	1.85	1.44	1.89	5.13	21.5	101	37.7	10.1	4.66
MAX	5.6	3.6	1.9	1.9	1.5	4.5	6.4	42	186	83	17	6.4
MIN	3.6	1.8	1.8	1.5	1.2	1.4	4.5	6.4	37	19	6.4	3.6
AC-FT	294	143	116	114	80	116	305	1320	6000	2320	619	277

CAL YR 1977 TOTAL 2662.75 MEAN 7.30 MAX 43 MIN .90 AC-FT 5280
WTR YR 1978 TOTAL 5898.00 MEAN 16.2 MAX 186 MIN 1.2 AC-FT 11700

NOTE.--NO GAGE-HEIGHT RECORD DEC. 10 TO APR. 13.

09066200 BOOTH CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°39'02", long 106°19'16", at west line of sec.2, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.2 mi (0.3 km) upstream from U.S. Highway 6, 0.4 mi (0.6 km) upstream from mouth, 3.0 mi (4.8 km) northeast of Vail, and 7.0 mi (11.3 km) northeast of Minturn.

DRAINAGE AREA.--6.03 mi^2 (15.62 km^2).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,413 ft (2,564 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. No diversion or regulation above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 11.3 ft^3/s (0.320 m^3/s), 8,190 acre-ft/yr (10.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 355 ft^3/s (10.1 m^3/s) June 15, 1978, gage height, 4.07 ft (1.241 m); maximum gage height, 4.29 ft (1.308 m) July 4, 1975 (backwater from debris); minimum daily discharge, 0.20 ft^3/s (0.006 m^3/s) Feb. 8, 1967, Jan. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft^3/s (2.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 10	2330	306	8.67	3.93	1.198	June 24	2245	306	8.67	3.93	1.198
June 15	2215	*355	10.1	4.07	1.241	July 17	0400	110	3.12	3.32	1.012

Minimum daily discharge, 0.70 ft^3/s (0.020 m^3/s) Jan. 29 to Mar. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.3	1.6	.80	.70	.70	8.0	9.1	30	114	10	2.7
2	3.6	2.2	1.6	.80	.70	.70	6.5	9.1	35	114	10	2.7
3	3.5	2.6	1.6	.80	.70	.70	6.0	9.5	46	103	9.1	2.7
4	3.5	2.6	1.5	.80	.70	.70	6.0	8.9	43	97	8.3	2.6
5	3.5	2.6	1.0	.80	.70	.70	6.0	8.5	31	78	7.9	2.5
6	4.5	2.5	.80	.80	.70	.70	6.0	7.7	29	69	7.5	2.3
7	5.6	2.4	.80	.80	.70	.70	7.0	7.3	41	62	7.5	2.3
8	4.5	2.2	.80	.80	.70	.70	8.0	6.7	40	62	7.5	2.3
9	4.3	1.8	.80	.80	.70	.70	8.5	6.9	65	51	7.1	2.0
10	4.0	2.4	.80	.80	.70	.70	7.5	8.3	200	44	6.9	2.0
11	3.8	2.3	.80	.80	.70	.70	7.0	9.8	198	46	6.7	2.2
12	3.5	2.0	.80	.80	.70	.80	7.5	9.3	148	47	7.1	2.2
13	3.6	1.9	.80	.80	.70	.90	8.0	11	128	44	6.9	2.0
14	3.8	1.8	.80	.80	.70	1.0	7.9	17	145	34	7.5	1.7
15	4.0	1.7	.80	.80	.70	1.2	7.7	24	218	31	7.3	1.5
16	3.9	1.6	.80	.80	.70	1.2	7.9	47	206	46	6.0	1.4
17	3.8	1.6	.80	.80	.70	1.2	8.5	50	145	103	5.3	1.9
18	3.5	1.4	.80	.80	.70	1.2	7.9	24	107	82	5.1	2.1
19	3.5	1.6	.80	.80	.70	1.2	7.5	17	103	54	4.6	2.0
20	3.4	1.4	.80	.80	.70	1.2	7.3	17	132	35	4.3	2.0
21	3.5	1.8	.80	.80	.70	1.2	7.5	20	128	26	5.0	1.8
22	3.6	1.7	.80	.80	.70	1.2	7.3	19	172	20	4.8	1.9
23	3.4	1.7	.80	.90	.70	1.2	6.9	29	178	17	4.6	1.8
24	3.0	1.7	.80	.90	.70	1.2	7.1	46	172	16	4.5	1.6
25	2.8	1.6	.80	.90	.70	1.2	8.5	47	195	15	4.5	1.6
26	2.7	1.7	.80	.90	.70	1.5	11	40	216	14	4.3	1.4
27	2.6	1.6	.80	.90	.70	2.0	12	43	132	14	3.6	1.3
28	2.5	1.6	.80	.80	.70	2.5	11	30	125	14	3.3	1.3
29	2.5	1.6	.80	.70	---	3.0	9.8	24	114	14	3.0	1.3
30	2.5	1.6	.80	.70	---	4.0	9.5	28	121	13	2.9	1.3
31	3.0	---	.80	.70	---	6.0	---	30	---	11	2.9	---
TOTAL	109.3	57.5	28.10	25.00	19.60	42.60	237.3	664.1	3643	1490	186.0	58.4
MEAN	3.53	1.92	.91	.81	.70	1.37	7.91	21.4	121	48.1	6.00	1.95
MAX	5.6	2.6	1.6	.90	.70	6.0	12	50	218	114	10	2.7
MIN	2.5	1.4	.80	.70	.70	.70	6.0	6.7	29	11	2.9	1.3
AC-FT	217	114	56	50	39	84	471	1320	7230	2960	369	116

CAL YR 1977 TOTAL 2469.56 MEAN 6.77 MAX 76 MIN .30 AC-FT 4900
WTR YR 1978 TOTAL 6560.90 MEAN 18.0 MAX 218 MIN .70 AC-FT 13010

NOTE.--NO GAGE-HEIGHT RECORD DEC. 13 TO APR. 13.

09066250 GORE CREEK AT VAIL, CO

LOCATION.--Lat 39°38'35", long 106°20'44", in NW¼NE¼ sec.9, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 650 ft (198 m) north of Vail golf course clubhouse, 1.4 mi (2.3 km) downstream from mouth of Booth Creek, and 1.5 mi (2.4 km) east of Interstate Highway 70 turnoff at Vail.

DRAINAGE AREA.--55 mi² (142 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder and automatic sediment sampler. Altitude of gage is 8,250 ft (2,515 m), from topographic map.

REMARKS.--Records good. No diversion or regulation above station.

AVERAGE DISCHARGE.--5 years, 90.5 ft³/s (2.563 m³/s), 65,570 acreft/yr (80.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) June 15, 1978, gage height, 4.41 ft (1.344 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Dec. 30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) at 1830 June 15, gage height, 4.41 ft (1.344 m), only peak above base of 900 ft³/s (25 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	12	8.4	7.8	8.0	8.0	55	68	326	630	125	32
2	18	15	9.0	6.7	8.0	8.0	44	69	362	594	115	31
3	18	15	9.0	8.1	8.0	8.0	42	74	394	550	110	30
4	18	16	9.0	7.8	8.0	8.0	41	75	410	506	105	30
5	21	16	9.0	7.4	8.0	8.0	42	68	370	473	130	29
6	37	15	9.0	7.6	8.0	8.0	40	63	374	442	95	29
7	29	13	9.0	8.0	8.0	8.0	48	60	460	410	85	27
8	24	7.8	9.0	8.0	8.0	7.0	56	55	446	414	80	26
9	26	12	9.0	8.0	8.0	7.0	60	56	550	394	75	24
10	20	12	10	8.0	8.0	9.0	54	63	831	366	72	26
11	21	12	11	8.0	8.0	9.0	50	74	945	378	59	29
12	23	12	9.8	8.0	8.0	9.0	56	74	915	370	56	29
13	23	12	10	8.0	7.0	9.0	56	80	915	350	59	25
14	22	12	9.8	8.0	7.0	9.0	54	128	1020	326	74	23
15	20	12	9.8	8.0	7.0	9.0	56	212	1080	309	75	22
16	20	12	9.8	8.0	7.0	9.0	57	298	968	302	52	22
17	19	11	9.1	8.0	6.0	9.0	62	306	885	323	56	24
18	18	11	9.8	8.0	6.0	9.0	56	225	818	295	54	25
19	18	11	10	8.0	6.5	10	48	186	798	267	48	26
20	16	9.1	9.5	8.0	6.5	10	50	198	812	246	46	27
21	18	12	9.5	8.0	6.5	11	54	228	900	228	46	25
22	19	13	10	8.0	6.5	14	52	225	945	210	48	24
23	18	12	8.4	8.0	7.0	12	47	274	1030	190	47	23
24	16	11	9.1	8.0	7.5	10	48	326	1040	175	45	22
25	16	11	9.8	8.0	8.0	9.5	57	358	1000	160	43	21
26	15	12	9.1	8.1	8.0	10	72	334	950	150	42	20
27	14	12	8.4	7.8	8.0	15	84	334	850	143	39	20
28	14	13	8.1	8.0	8.0	20	79	302	700	143	36	20
29	14	12	8.1	8.0	---	26	72	270	630	135	34	19
30	14	9.8	8.1	8.0	---	35	72	312	656	130	32	18
31	13	---	8.1	8.0	---	46	---	320	---	130	32	---
TOTAL	601	365.7	285.7	245.3	208.5	379.5	1664	5715	22380	9739	2025	749
MEAN	19.4	12.2	9.22	7.91	7.45	12.2	55.5	184	746	314	65.3	25.0
MAX	37	16	11	8.1	8.0	46	84	358	1080	630	125	32
MIN	13	7.8	8.1	6.7	6.0	7.0	40	55	326	130	32	18
AC-FT	1190	725	567	487	414	753	3300	11340	44390	19320	4020	1490

CAL YR 1977 TOTAL 18243.8 MEAN 50.0 MAX 476 MIN 3.7 AC-FT 36190
WTR YR 1978 TOTAL 44357.7 MEAN 122 MAX 1080 MIN 6.0 AC-FT 87980

NOTE.--NO GAGE-HEIGHT RECORD JAN. 28 TO MAR. 21.

09066250 GORE CREEK AT VAIL, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1973 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to current year.

INSTRUMENTATION.--Pumping sediment sampler since October 1973.

REMARKS.--Daily sediment records not available at time of publication. Will be published with 1979 records.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 280 mg/L July 21, 1974; minimum daily, 1 mg/L many days during 1977.
SEDIMENT LOADS: Maximum daily, 241 tons (219 t) May 29, 1974; minimum daily, 0.01 ton (0.01 t) many days during winter months in 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
NOV												
10...	1305	E12	140	7.5	3.0	71	22	4.0	1.4	75	--	--
FEB												
21...	1600	E6.5	170	7.9	.0	84	27	4.0	2.2	84	.22	.01
MAR												
14...	1500	E6.5	190	7.2	.0	88	28	4.4	6.1	85	.29	.01
APR												
12...	1400	E59	160	7.6	8.0	69	21	3.9	4.9	72	.39	.00
16...	1800	E69	160	7.6	5.5	73	23	3.8	4.8	77	.39	.00
27...	1400	E86	130	7.7	4.0	91	30	3.8	3.6	66	.29	.00
MAY												
05...	0900	66	142	7.6	2.0	72	23	3.6	3.4	83	.31	.01
09...	1000	53	160	7.8	4.0	74	24	3.4	3.7	82	.82	.00
18...	0900	223	102	7.8	2.0	58	19	2.6	1.4	61	.57	.00
23...	1200	264	100	8.1	6.0	49	15	2.8	1.5	62	.11	.00
31...	1315	330	93	8.0	4.0	51	16	2.7	1.1	56	.14	.00
JUN												
05...	1415	390	96	8.1	5.0	44	14	2.2	.9	53	.09	.00
14...	1000	1240	69	7.9	5.0	37	12	1.8	.8	43	.06	.01
22...	1200	579	60	8.5	8.0	39	13	1.7	.6	38	.18	.01
28...	1800	162	59	7.7	9.0	--	--	1.5	.9	32	.12	.00
JUL												
26...	1200	154	90	7.8	11.0	38	12	2.0	.7	37	.04	.01
SEP												
07...	1335	35	145	7.9	10.0	67	21	3.5	3.1	76	.04	--
27...	0905	20	110	7.6	5.0	73	23	3.7	2.0	74	.10	.00

E ESTIMATED.

09066300 MIDDLE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'45", long 106°22'54", in sec.6, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft (61 m) upstream from Interstate Highway 70, 0.2 mi (0.3 km) upstream from mouth, and 5.0 mi (8.0 km) northeast of Minturn. Prior to Oct. 1, 1977, at site 700 ft (210 m) upstream.

DRAINAGE AREA.--5.97 mi² (15.46 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,200 ft (2,499 m), from topographic map.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. No diversion or regulation above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 5.39 ft³/s (0.153 m³/s), 3,910 acre-ft/yr (4.82 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 116 ft³/s (3.29 m³/s) June 20, 1974, gage height, 2.65 ft (0.808 m) datum then in use; maximum gage height, 3.23 ft (0.985 m) datum then in use, July 4, 1975 (backwater from debris); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94 ft³/s (2.66 m³/s) at 2000 June 15, gage height, 3.03 ft (0.924 m), only peak above base of 60 ft³/s (1.7 m³/s); minimum daily, 0.04 ft³/s (0.001 m³/s) Dec. 31 to Feb. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.32	.12	.04	.04	.10	1.2	2.7	26	48	4.7	1.5
2	.37	.57	.12	.04	.04	.10	1.0	2.7	28	45	4.6	1.4
3	.41	.57	.12	.04	.04	.10	.92	3.0	30	44	4.2	1.4
4	.37	.68	.12	.04	.04	.10	.86	3.0	31	41	4.0	1.3
5	.48	.72	.12	.04	.04	.10	.89	3.0	29	37	3.6	1.2
6	1.2	.70	.12	.04	.04	.10	.92	2.9	29	33	3.5	1.2
7	1.7	.54	.12	.04	.04	.10	1.1	2.8	30	29	3.3	1.3
8	1.2	.18	.10	.04	.04	.10	1.6	2.7	31	28	3.2	1.2
9	1.1	.19	.10	.04	.04	.10	1.9	2.8	37	25	3.1	1.2
10	.75	.31	.10	.04	.04	.10	1.7	3.2	44	22	3.0	1.1
11	.40	.31	.12	.04	.04	.10	1.6	3.9	50	21	2.9	1.2
12	.80	.29	.12	.04	.04	.10	1.7	3.9	50	19	2.9	1.2
13	.80	.22	.12	.04	.04	.10	1.8	4.8	54	17	3.0	1.2
14	.94	.20	.12	.04	.04	.08	1.8	7.8	62	16	3.0	1.0
15	.89	.24	.10	.04	.04	.08	1.7	12	73	15	3.2	.92
16	.78	.15	.10	.04	.04	.10	1.8	18	81	14	2.8	.90
17	.68	.12	.10	.04	.04	.10	1.9	22	70	14	2.5	.92
18	.65	.12	.10	.04	.04	.10	1.9	18	62	12	2.4	.96
19	.59	.12	.10	.04	.04	.10	1.8	17	62	11	2.3	.98
20	.70	.12	.10	.04	.06	.10	1.8	18	62	10	2.2	.98
21	.78	.12	.10	.04	.06	.10	1.9	19	61	9.9	2.1	.98
22	.63	.12	.10	.04	.06	.10	1.9	20	67	8.8	2.0	1.0
23	.59	.12	.10	.04	.06	.08	1.9	24	68	8.4	2.0	1.1
24	.59	.12	.10	.04	.06	.08	1.8	28	69	7.4	1.8	1.1
25	.48	.12	.10	.04	.10	.07	2.1	29	71	7.0	1.8	.96
26	.48	.12	.08	.04	.10	.08	2.5	30	62	5.5	1.7	.96
27	.43	.12	.08	.04	.10	.11	3.0	30	58	6.0	1.6	.88
28	.41	.12	.08	.04	.10	.23	2.8	27	58	5.7	1.6	.90
29	.52	.12	.08	.04	---	.36	2.7	26	54	5.4	1.6	.88
30	.46	.12	.06	.04	---	.59	2.7	26	52	5.5	1.5	.82
31	.23	---	.04	.04	---	1.0	---	26	---	4.8	1.5	---
TOTAL	20.78	7.87	3.14	1.24	1.46	4.76	53.19	439.2	1561	576.4	83.6	32.64
MEAN	.67	.26	.10	.040	.052	.15	1.77	14.2	52.0	18.6	2.70	1.09
MAX	1.7	.72	.12	.04	.10	1.0	3.0	30	81	48	4.7	1.5
MIN	.23	.12	.04	.04	.04	.07	.86	2.7	26	4.8	1.5	.82
AC-FT	41	16	6.2	2.5	2.9	9.4	106	871	3100	1140	166	65

CAL YR 1977 TOTAL 900.90 MEAN 2.47 MAX 40 MIN .03 AC-FT 1790
WTR YR 1978 TOTAL 2785.28 MEAN 7.63 MAX 81 MIN .04 AC-FT 5520

NOTE.--NO GAGE-HEIGHT RECORD NOV. 17 TO MAR. 22, AUG. 25 TO SEPT. 30.

09066400 RED SANDSTONE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°40'58", long 106°24'03", Eagle County, Hydrologic Unit 14010003, on left bank 150 ft (46 m) upstream from road culvert, 1,400 ft (430 m) upstream from Indian Creek, and 6.8 mi (10.9 km) north of Minturn.

DRAINAGE AREA.--7.27 mi² (18.83 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,150 ft (2,789 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 8.60 ft³/s (0.244 m³/s), 6,230 acre-ft/yr (7.68 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 207 ft³/s (5.86 m³/s) June 10, 1973, gage height, 4.41 ft (1.344 m), from rating curve extended above 120 ft³/s (3.4 m³/s); minimum daily, 0.20 ft³/s (0.006 m³/s) Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 155 ft³/s (4.39 m³/s) at 2000 June 15, gage height, 4.24 ft (1.292 m), only peak above base of 70 ft³/s (2.0 m³/s); minimum daily, 0.67 ft³/s (0.019 m³/s) Mar. 12-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.3	.96	.75	.74	.74	2.3	4.6	50	40	5.0	1.6
2	1.5	1.7	1.0	.74	.74	.74	1.8	5.7	57	36	4.7	1.6
3	1.4	1.7	1.0	.78	.74	.74	1.5	6.8	64	33	4.3	1.6
4	1.3	1.5	1.0	.83	.74	.74	1.3	6.5	64	30	4.0	1.5
5	1.4	1.5	1.0	.81	.74	.75	1.5	5.6	55	28	3.7	1.4
6	1.9	1.5	.98	.74	.81	.81	1.4	4.8	59	25	3.6	1.3
7	2.9	1.4	1.0	.74	.84	.75	1.9	4.2	64	24	3.5	1.4
8	2.2	1.2	1.0	.74	.87	.76	2.7	3.8	66	22	3.5	1.4
9	1.9	1.2	.98	.74	.79	.81	3.1	4.9	80	21	3.4	1.3
10	1.9	1.2	1.0	.74	.84	.81	2.3	5.4	107	19	3.2	1.4
11	1.7	1.2	1.0	.74	.85	.76	2.0	6.7	109	19	3.3	1.8
12	2.8	1.3	1.0	.74	.86	.67	2.6	6.1	96	18	3.7	1.7
13	2.0	1.2	1.0	.74	.84	.67	2.9	8.6	101	17	3.8	1.5
14	1.5	1.2	1.0	.75	.82	.67	2.5	15	107	15	4.2	1.4
15	1.5	1.2	.96	.74	.81	.67	2.5	24	113	15	4.3	1.4
16	1.4	1.1	.95	.74	.81	.67	2.7	36	106	15	3.3	1.3
17	1.4	.99	1.3	.74	.78	.69	3.0	39	93	14	2.9	1.7
18	1.3	1.0	1.0	.74	.74	.77	2.5	25	84	12	2.8	1.8
19	1.2	1.0	.98	.80	.84	.84	2.5	22	81	11	2.5	1.9
20	1.2	.96	.92	.81	.84	.81	2.5	25	79	10	2.3	2.0
21	1.4	.90	.90	.81	.81	.80	3.0	26	75	9.6	2.3	2.3
22	1.4	1.0	.92	.81	.77	.93	2.9	29	76	8.8	2.3	2.6
23	1.4	1.0	.94	.82	.71	.81	2.6	36	74	8.1	2.3	2.4
24	1.3	1.0	.98	.80	.72	.78	3.0	45	73	7.5	2.1	2.1
25	1.3	1.0	.91	.86	.74	.74	4.4	46	69	6.7	2.1	1.8
26	1.3	1.0	.82	.84	.74	.78	6.1	46	60	6.3	2.1	1.7
27	1.2	1.0	.84	.79	.74	.90	7.3	46	53	5.9	1.9	1.6
28	1.2	1.0	.82	.83	.74	.99	5.6	40	49	5.6	1.8	1.5
29	1.2	1.0	.82	.80	---	1.1	4.8	42	45	5.6	1.7	1.5
30	1.3	1.0	.82	.76	---	1.4	4.7	49	45	6.0	1.7	1.4
31	1.1	---	.97	.74	---	2.1	---	50	---	5.2	1.7	---
TOTAL	48.0	35.25	29.77	24.01	22.01	26.20	89.9	714.7	2254	499.3	94.0	49.9
MEAN	1.55	1.18	.96	.77	.79	.85	3.00	23.1	75.1	16.1	3.03	1.66
MAX	2.9	1.7	1.3	.86	.87	2.1	7.3	50	113	40	5.0	2.6
MIN	1.1	.90	.82	.74	.71	.67	1.3	3.8	45	5.2	1.7	1.3
AC-FT	95	70	59	48	44	52	178	1420	4470	990	186	99

CAL YR 1977 TOTAL 1599.06 MEAN 4.38 MAX 35 MIN .40 AC-FT 3170
WTR YR 1978 TOTAL 3887.04 MEAN 10.6 MAX 113 MIN .67 AC-FT 7710

09067000 BEAVER CREEK AT AVON, CO

LOCATION.--Lat 39°37'47", long 106°31'20", in NE¼SW¼ sec.12, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on left bank at Avon, 550 ft (170 m) upstream from U.S. Highways 6 and 24, and 700 ft (213 m) upstream from mouth.

DRAINAGE AREA.--15.7 mi² (40.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to December 1911, January 1912 to September 1914 (fragmentary), May 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,453 ft (2,272 m), from topographic map. Prior to May 1, 1974, nonrecording gage near present site at different datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation above and below station. Slight natural regulation by several small lakes in headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 214 ft³/s (6.06 m³/s) June 13, 1978, gage height, 2.53 ft (0.771 m); minimum daily, 0.55 ft³/s (0.016 m³/s) Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 200 ft³/s (5.66 m³/s) June 13, gage height, 2.48 ft (0.756 m), only peak above base of 80 ft³/s (2.3 m³/s); maximum gage height, 2.53 ft (0.771 m) at 2130 June 13 (due to shifting control); minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.2	1.8	1.7	1.5	1.6	3.9	6.9	39	75	15	3.4
2	2.3	2.5	2.3	1.7	1.8	1.7	3.5	7.0	39	70	14	3.4
3	2.3	2.4	1.9	1.9	1.6	1.6	3.3	7.3	41	69	13	3.2
4	2.2	2.4	2.0	1.8	1.6	1.6	3.3	7.0	44	64	12	3.2
5	2.4	2.4	2.1	1.6	1.6	1.8	3.4	6.8	42	59	10	2.9
6	2.8	2.4	1.8	1.6	1.6	1.8	3.4	6.5	40	56	6.2	2.8
7	4.0	2.4	1.9	1.7	1.5	1.8	4.0	6.2	44	51	5.6	3.0
8	3.9	2.3	2.0	1.6	1.5	1.6	4.6	6.2	47	47	5.5	4.3
9	3.4	2.1	1.9	1.6	1.6	1.8	4.7	6.4	62	45	5.4	4.0
10	3.2	2.3	1.8	1.6	1.6	1.8	4.2	6.9	97	45	5.3	3.4
11	2.7	2.4	1.8	1.6	1.6	1.6	4.2	7.2	130	43	5.6	3.6
12	2.6	2.7	2.0	1.6	1.6	1.8	4.7	7.3	145	41	6.5	3.5
13	2.6	2.5	1.9	1.6	1.6	1.6	4.6	7.9	154	37	6.9	3.9
14	2.6	3.0	1.8	1.5	1.6	1.7	4.5	9.7	123	34	10	4.8
15	2.6	2.0	1.8	1.5	1.5	2.2	4.7	15	120	32	10	4.0
16	2.6	1.9	1.8	1.6	1.5	2.3	4.9	23	114	32	9.5	4.0
17	2.6	1.8	1.7	1.6	1.6	2.3	5.1	26	112	33	7.6	4.3
18	2.6	1.8	2.1	1.6	1.4	2.2	4.7	20	102	33	6.3	4.6
19	2.5	1.9	1.9	1.7	1.6	2.0	4.5	17	101	28	5.2	5.2
20	2.5	2.2	1.9	1.8	1.9	2.1	4.8	18	101	26	5.0	5.3
21	2.7	2.3	1.8	1.6	1.7	2.1	4.9	24	103	26	4.8	5.0
22	2.6	2.6	2.0	1.7	1.5	2.1	4.8	27	104	24	4.6	5.5
23	2.5	2.0	1.8	1.6	1.6	2.0	4.7	30	105	22	4.7	5.8
24	2.4	2.5	1.8	1.7	1.6	2.0	4.8	35	112	21	4.7	5.6
25	2.4	1.9	1.7	1.8	1.6	2.0	5.5	37	108	20	4.6	5.3
26	2.3	2.0	1.7	1.8	1.7	2.0	6.3	37	92	19	4.4	4.6
27	2.3	1.9	1.7	1.7	1.5	2.2	7.2	40	92	18	4.3	4.4
28	2.3	1.9	1.7	1.8	1.8	2.5	6.9	36	89	18	3.8	4.0
29	2.3	2.0	1.7	1.9	---	2.8	6.9	32	84	17	3.9	3.6
30	2.5	1.9	1.7	1.7	---	3.1	7.1	35	81	17	3.6	3.2
31	2.4	---	1.8	1.7	---	3.7	---	39	---	16	3.5	---
TOTAL	81.5	66.6	57.6	51.9	44.8	63.6	144.1	590.3	2667	1135	211.5	123.8
MEAN	2.63	2.22	1.86	1.67	1.60	2.05	4.80	19.0	88.9	36.6	6.82	4.13
MAX	4.0	3.0	2.3	1.9	1.9	3.7	7.2	40	154	75	15	5.8
MIN	2.2	1.8	1.7	1.5	1.4	1.6	3.3	6.2	39	16	3.5	2.8
AC-FT	162	132	114	103	89	126	286	1170	5290	2250	420	246

CAL YR 1977 TOTAL 1740.62 MEAN 4.77 MAX 54 MIN .55 AC-FT 3450
WTR YR 1978 TOTAL 5237.70 MEAN 14.3 MAX 154 MIN 1.4 AC-FT 10390

09067000 BEAVER CREEK AT AVON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1975 to current year.

INSTRUMENTATION.--Turbidity recorder since September 1974.

REMARKS.--Daily maximum and minimum turbidity data available in district office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT											
12...	0845	2.0	230	7.0	.5	9.6	100	48	31	6.0	--
NOV											
16...	0845	2.0	270	7.7	1.0	9.8	130	67	39	7.3	--
DEC											
13...	0845	2.0	256	7.3	.0	11.0	130	63	38	7.6	--
JAN											
17...	0900	5.6	263	7.2	.0	10.4	130	71	38	8.0	--
FEB											
14...	0945	1.7	255	7.3	.0	10.4	130	70	40	8.2	2.6
MAR											
14...	1000	1.7	250	7.2	.0	11.0	130	74	40	8.2	1.4
APR											
11...	1030	3.9	344	7.4	2.0	10.6	160	84	46	12	2.5
MAY											
23...	1015	29	133	6.9	4.0	9.6	65	18	18	4.9	2.7
JUN											
07...	1015	43	115	6.8	5.0	9.6	46	14	13	3.4	1.7
JUL											
19...	1045	28	75	7.2	11.0	8.4	33	10	9.8	2.0	1.6
AUG											
24...	1000	4.6	177	7.3	9.0	9.0	83	31	24	5.7	4.3

DATE	SODIUM AD-SORP-TION RATIO	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT										
12...	--	66	54	57	1.5	129	.18	.70	.00	.00
NOV										
16...	--	74	61	65	2.2	161	.22	.87	.01	.00
DEC										
13...	--	77	63	65	.6	169	.23	.91	.05	.00
JAN										
17...	--	69	57	64	.8	161	.22	2.43	.05	.00
FEB										
14...	.1	78	64	67	1.1	175	.24	.82	.03	.00
MAR										
14...	.1	73	60	69	.8	168	.23	.78	.02	.00
APR										
11...	.1	98	80	90	1.1	217	.30	2.29	.06	.00
MAY										
23...	.1	57	47	21	1.1	87	.12	6.81	.06	.02
JUN										
07...	.1	40	33	23	.6	64	.09	7.50	.03	.00
JUL										
19...	.1	28	23	12	.4	45	.06	3.45	.02	.02
AUG										
24...	.2	64	52	34	.8	99	.13	1.24	.00	.01

09069000 EAGLE RIVER AT GYPSUM, CO

LOCATION.--Lat 39°39'00", long 106°57'06", Eagle County, Hydrologic Unit 14010003, at bridge at Gypsum, about 400 ft (120 m) upstream from Gypsum Creek, about 520 ft (160 m) upstream from bridge on U.S. Highways 6 and 24, and about 550 ft (170 m) upstream from gaging station.

DRAINAGE AREA.--944 mi² (2,445 km²), at gaging station.

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1947 to current year.
WATER TEMPERATURE: April 1949 to current year.

REMARKS.--Records of discharge are given for Eagle River below Gypsum (station 09070000).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,850 micromhos Aug. 6, 1949; minimum daily, 130 micromhos June 9, 10, 1976.
WATER TEMPERATURES: Maximum, 24°C Aug. 24, 1949; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,200 micromhos Oct. 1; minimum daily, 175 micromhos June 18, 19.
WATER TEMPERATURES: Maximum daily, 20.0°C Aug. 31; minimum daily, freezing point on many days during November to March.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 12...	1100	202	880	8.0	4.5	11.4	380	250	120
NOV 16...	1045	170	970	8.2	4.0	11.8	370	220	110
DEC 13...	1100	161	950	7.8	.5	12.1	370	230	110
JAN 17...	1115	153	1010	7.9	.5	12.0	370	230	110
FEB 14...	1200	140	920	8.0	2.0	11.6	370	230	110
MAR 14...	1315	157	860	8.0	4.5	11.2	370	240	110
APR 11...	1315	345	510	7.8	10.5	9.8	210	120	61
MAY 23...	1400	1620	230	7.6	10.0	8.8	93	28	28
JUN 07...	1315	2160	205	7.6	9.5	9.2	93	34	27
JUL 19...	1330	1180	295	8.0	14.5	8.8	120	54	35
AUG 24...	1245	253	780	8.1	17.0	8.6	320	250	100

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 12...	20	62	1.4	3.0	160	0	130	250	88
NOV 16...	23	67	1.5	3.0	180	0	150	240	97
DEC 13...	23	70	1.6	3.0	170	0	140	250	100
JAN 17...	23	64	1.5	2.7	170	0	140	210	91
FEB 14...	22	66	1.5	2.9	170	0	140	220	94
MAR 14...	23	55	1.2	2.8	160	0	130	230	84
APR 11...	15	24	.7	1.5	110	0	90	130	30
MAY 23...	5.7	7.4	.3	1.1	80	0	66	37	7.0
JUN 07...	6.1	6.1	.3	.9	71	0	58	42	5.9
JUL 19...	6.8	12	.5	1.1	75	0	62	58	16
AUG 24...	17	44	1.1	2.5	85	0	70	260	60

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 12...	.1	8.0	631	.86	344	.12	.01	50	20
NOV 16...	.1	7.3	637	.87	292	.21	.01	30	40
DEC 13...	.2	9.1	651	.89	283	.43	.01	0	60
JAN 17...	.1	9.2	596	.81	246	.48	.07	10	40
FEB 14...	.2	8.8	610	.83	231	.47	.07	20	50
MAR 14...	.2	7.3	593	.81	251	.43	.06	10	80
APR 11...	.1	7.9	326	.44	304	.39	.01	60	460
MAY 23...	.1	6.7	134	.18	586	.34	.01	160	90
JUN 07...	.1	6.1	131	.18	764	.35	.00	100	50
JUL 19...	.1	6.1	173	.24	551	.07	.04	100	40
AUG 24...	.1	8.1	534	.73	365	.23	.01	50	40

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	400	740	900	850	---	620	425	240	195	460	
2	1140	520	975	850	800	---	610	440	235	195	475	
3	1120	500	940	1100	810	---	560	450	245	200	475	
4	1100	925	900	1000	810	---	530	455	250	195	500	
5	1090	910	850	900	845	---	600	440	260	190	520	
6	1100	900	880	900	845	---	590	425	245	240	520	
7	1080	900	975	900	850	---	600	420	240	240	540	
8	810	890	800	900	750	---	590	450	230	240	560	
9	880	760	800	910	775	---	590	430	230	255	550	
10	900	900	1050	875	790	---	550	420	210	260	600	
11	940	890	900	800	800	---	520	410	205	260	620	
12	1000	1100	875	825	800	---	510	400	200	275	645	
13	990	1120	900	850	775	---	500	350	190	280	660	
14	900	950	900	880	790	---	500	320	185	275	680	
15	950	1000	925	620	800	---	510	285	185	290	680	
16	945	980	880	580	775	900	480	260	185	300	710	
17	950	975	860	850	790	925	475	215	180	300	730	
18	940	1000	875	875	775	920	450	230	175	310	755	
19	945	1120	875	820	750	900	475	225	175	325	790	
20	925	775	950	---	750	900	500	235	180	325	820	
21	925	800	1050	---	800	910	550	220	180	340	845	
22	940	1050	1000	920	815	900	560	245	180	370	850	
23	910	900	990	900	800	910	520	260	180	385	865	
24	900	890	950	800	820	925	510	275	185	385	865	
25	845	870	975	800	810	925	500	280	185	400	870	
26	885	880	960	810	800	960	460	290	195	425	875	
27	890	900	950	800	775	945	400	260	200	450	875	
28	920	850	1000	825	800	920	360	280	210	460	875	
29	925	860	760	800	---	900	380	275	210	465	900	
30	950	740	900	750	---	800	400	260	200	465	900	
31	900	---	900	750	---	775	---	260	---	500	910	

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	1.0	.0	.0	4.0	---	9.0	5.0	6.0	10.0	9.0	
2	6.0	1.0	.0	.0	.0	---	6.0	5.0	8.0	10.0	9.0	
3	10.0	2.0	1.0	.0	.0	---	4.0	6.0	8.0	11.0	10.0	
4	10.0	2.0	3.0	.0	.0	---	5.0	5.0	7.0	9.0	9.0	
5	16.0	2.0	1.0	.0	2.0	---	7.0	5.0	9.0	10.0	9.0	
6	12.0	8.0	.0	.0	1.0	---	6.0	4.0	8.0	10.0	11.0	
7	12.0	5.0	.0	.0	.0	---	7.0	5.0	7.0	9.0	11.0	
8	12.0	5.0	.0	.0	.0	---	7.0	6.0	8.0	9.0	10.0	
9	8.0	.0	.0	.0	.0	---	7.0	6.0	8.0	10.0	10.0	
10	9.0	.0	.0	.0	.0	---	6.0	5.0	9.0	10.0	10.0	
11	8.0	.0	.0	1.0	.0	---	8.0	6.0	9.0	11.0	9.0	
12	9.0	6.0	.0	.0	.0	---	5.0	7.0	8.0	9.0	10.0	
13	8.0	5.0	.0	.0	.0	---	6.0	7.0	11.0	9.0	9.0	
14	11.0	.0	1.0	.0	.0	---	4.0	8.0	10.0	10.0	9.0	
15	12.0	2.0	3.0	.0	.0	---	4.0	9.0	7.0	10.0	8.0	
16	7.0	2.0	.0	.0	.0	.0	5.0	9.0	7.0	15.0	9.0	
17	12.0	3.0	.0	.0	.0	1.0	2.0	6.0	8.0	9.0	9.0	
18	8.0	4.0	.0	.0	.0	1.0	3.0	5.0	6.0	9.0	10.0	
19	12.0	4.0	.0	.0	.0	1.0	3.0	5.0	7.0	10.0	9.0	
20	10.0	.0	.0	---	.0	1.0	5.0	4.0	8.0	11.0	9.0	
21	11.0	.0	.0	---	.0	.0	6.0	6.0	7.0	11.0	10.0	
22	11.0	1.0	.0	1.0	.0	.0	6.0	6.0	8.0	10.0	10.0	
23	9.0	.0	.0	.0	.0	2.0	7.0	8.0	8.0	9.0	9.0	
24	9.0	1.0	.0	.0	.0	3.0	10.0	6.0	7.0	9.0	8.0	
25	4.0	2.0	.0	.0	.0	3.0	9.0	7.0	8.0	9.0	8.0	
26	4.0	3.0	.0	.0	.0	4.0	9.0	7.0	8.0	10.0	9.0	
27	5.0	2.0	.0	.0	.0	8.0	8.0	6.0	9.0	10.0	10.0	
28	5.0	1.0	.0	.0	1.0	7.0	6.0	6.0	11.0	9.0	18.0	
29	5.0	.0	.0	.0	---	.0	6.0	7.0	10.0	9.0	18.0	
30	8.0	.0	.0	.0	---	8.0	5.0	8.0	10.0	10.0	19.0	
31	4.0	---	.0	.0	---	8.0	---	6.0	---	17.0	20.0	

09070000 EAGLE RIVER BELOW GYPSUM, CO

LOCATION.--Lat 39°38'58", long 106°57'11", in SW¼NW¼ sec.5, T.5 S., R.85 W., Eagle County, Hydrologic Unit 14010003, on right bank 30 ft (9 m) downstream from bridge on U.S. Highways 6 and 24 at Gypsum and 150 ft (46 m) downstream from Gypsum Creek.

DRAINAGE AREA.--944 mi² (2,445 km²).

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,275 ft (1,913 m), from topographic map.

REMARKS.--Records good. Transmountain diversions above station (see elsewhere in this report). Transbasin diversions above station from Robinson Reservoir, capacity, 2,520 acre-ft (3.11 hm³) to Tenmile Creek for mining development. Many small diversions for irrigation of hay meadows above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 559 ft³/s (15.83 m³/s), 405,000 acre-ft/yr (499 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,580 ft³/s (186 m³/s) June 11, 1952, gage height, 9.15 ft (2.789 m); maximum gage height, 9.17 ft (2.795 m) June 29, 1957; minimum daily discharge, 110 ft³/s (3.12 m³/s) Feb. 21, 1955, Feb. 3, 1956, Dec. 26, 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s (145 m³/s) at 0900 June 16, gage height, 8.28 ft (2.524 m), only peak above base of 3,500 ft³/s (99 m³/s); minimum daily, 120 ft³/s (3.40 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	187	174	152	149	147	359	493	1780	2640	571	210
2	171	178	194	123	138	154	344	471	1900	2360	556	212
3	174	188	194	142	140	166	329	492	2010	2270	515	212
4	174	187	201	190	148	152	304	509	2220	2130	482	212
5	171	179	199	178	138	157	310	491	1990	1950	465	195
6	177	177	168	170	147	165	296	464	1800	1830	445	183
7	184	177	204	169	147	159	303	424	2070	1710	437	182
8	196	177	201	171	146	154	354	405	2100	1670	415	200
9	216	168	170	169	141	153	435	368	2350	1640	407	204
10	220	154	202	173	144	158	398	412	3140	1690	394	196
11	216	165	181	167	143	160	349	486	3950	1620	435	200
12	207	171	186	160	142	161	365	528	3920	1620	405	210
13	213	170	183	157	139	157	380	567	4030	1510	420	200
14	217	171	187	149	137	156	377	736	4260	1370	444	200
15	214	171	185	163	138	149	379	1090	4270	1290	484	196
16	214	171	186	162	140	145	392	1650	4590	1380	439	196
17	211	170	152	153	133	151	421	1970	4160	1430	388	200
18	214	168	182	159	120	158	377	1480	3670	1360	361	230
19	211	175	172	149	137	169	359	1200	3530	1130	349	250
20	204	170	150	156	141	185	350	1220	3420	1000	330	269
21	205	148	124	155	142	190	354	1460	3360	976	306	260
22	209	195	134	149	134	204	369	1500	3510	911	292	250
23	214	208	184	144	137	201	351	1580	3690	805	278	265
24	207	199	189	141	138	196	344	1830	3690	754	250	255
25	200	203	183	144	140	184	380	1990	3820	716	257	244
26	192	207	178	158	143	178	452	1840	3480	683	254	235
27	185	202	164	154	144	190	571	1900	3010	661	255	230
28	179	196	185	131	143	206	572	1730	2850	648	238	230
29	179	201	181	146	---	230	523	1510	2690	652	230	225
30	183	192	179	161	---	257	526	1630	2690	652	224	216
31	189	---	173	146	---	296	---	1790	---	604	214	---
TOTAL	6111	5425	5545	4841	3929	5488	11623	34216	93920	41662	11520	6567
MEAN	197	181	179	156	140	177	387	1104	3131	1344	372	219
MAX	220	208	204	190	149	296	572	1990	4590	2640	571	269
MIN	165	148	124	123	120	145	296	368	1780	604	214	182
AC-FT	12120	10760	11000	9600	7790	10890	23050	67870	186300	82640	22850	13030

CAL YR 1977 TOTAL 94380 MEAN 259 MAX 1580 MIN 124 AC-FT 187200
WTR YR 1978 TOTAL 230847 MEAN 632 MAX 4590 MIN 120 AC-FT 457900

09070500 COLORADO RIVER NEAR DOTSERO, CO

LOCATION.--Lat 39°38'40", long 107°04'40", in sec.6, T.5 S., R.86 W., Eagle County, Hydrologic Unit 14010001, on left bank about 500 ft (150 m) south of U.S. Highways 6 and 24, 1.5 mi (2.4 km) west of Dotsero, and 1.5 mi (2.4 km) downstream from Eagle River.

DRAINAGE AREA.--4,394 mi² (11,380 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,130 ft (1,868 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, diversions for irrigation of 68,000 acres (275 km²) above station, and return flow from irrigated areas.

COOPERATION.--Gage-height record collected in cooperation with the Public Service Co. of Colorado.

AVERAGE DISCHARGE.--38 years, 2,077 ft³/s (58.82 m³/s), 1,505,000 acre-ft/yr (1,560 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft³/s (541 m³/s) June 8, 1952, gage height, 11.56 ft (3.523 m); minimum daily, 350 ft³/s (9.91 m³/s) Jan. 5, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s (328 m³/s) at 1300 June 16, gage height, 9.01 ft (2.746 m); minimum daily, 527 ft³/s (14.9 m³/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	782	667	718	755	778	1420	2180	6220	5150	1890	1250
2	1190	753	659	630	716	786	1600	2110	6330	4720	1850	1280
3	1200	760	732	650	747	817	1600	2130	6270	4400	1730	1350
4	1170	757	782	800	764	775	1550	2350	6610	4090	1620	1350
5	957	742	764	920	742	796	1500	2370	6360	3680	1530	1340
6	1100	723	642	788	753	813	1400	2260	6170	3340	1350	1260
7	1230	724	686	770	761	796	1360	2020	6480	3160	1310	1290
8	1290	709	756	757	775	785	1500	1910	6560	3210	1250	1340
9	1290	678	615	779	753	774	1720	1760	6810	3180	1240	1420
10	1220	625	675	752	762	780	1730	1760	8120	3210	1230	1410
11	1180	679	691	771	763	751	1520	1970	9980	3220	1230	1430
12	1130	618	687	744	763	750	1470	2130	10400	3260	1520	1470
13	1110	593	677	779	742	742	1550	2240	10500	3150	1520	1440
14	1070	585	736	779	730	742	1590	2640	10600	3050	1570	1350
15	1050	585	750	761	736	723	1580	3630	10400	3070	1650	1350
16	1050	584	725	762	744	708	1640	4950	10800	3170	1630	1330
17	892	577	626	763	680	720	1740	6190	9950	3300	1620	1320
18	781	643	660	765	711	727	1650	5930	8670	3390	1590	1360
19	766	674	664	709	732	745	1490	5090	7910	3130	1430	1410
20	755	678	655	745	747	794	1440	4660	7200	3070	1250	1450
21	724	527	615	743	760	824	1420	4900	6800	2960	1220	1380
22	755	651	580	720	740	841	1440	5220	6750	2870	1250	1360
23	768	691	660	723	735	870	1450	5910	6910	2730	1430	1330
24	754	691	840	730	725	852	1370	6750	6900	2620	1380	1260
25	738	710	900	786	737	837	1380	7390	7140	2360	1390	1250
26	743	719	830	848	755	809	1570	7260	6600	2080	1390	1240
27	738	734	790	790	768	826	1970	7160	5730	1980	1330	1220
28	721	716	820	740	766	867	2230	6560	5280	1920	1270	1250
29	708	715	920	751	---	933	2120	6000	5080	1890	1230	1240
30	744	699	920	784	---	1010	2120	5920	5110	1990	1240	1210
31	776	---	798	745	---	1130	---	6150	---	1970	1250	---
TOTAL	29750	20322	22522	23502	20862	25101	48120	129500	224650	95320	44260	39940
MEAN	960	677	727	758	745	810	1604	4177	7488	3075	1428	1331
MAX	1290	782	920	920	775	1130	2230	7390	10800	5150	1890	1470
MIN	708	527	580	630	680	708	1360	1760	5080	1890	1200	1210
AC-FT	59010	40310	44670	46620	41380	49790	95450	256900	445600	189100	87790	79220

CAL YR 1977 TOTAL 386689 MEAN 1059 MAX 2510 MIN 518 AC-FT 767000
WTR YR 1978 TOTAL 723849 MEAN 1983 MAX 10800 MIN 527 AC-FT 1436000

09070500 COLORADO RIVER NEAR DOTSERO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Partial-record station May 1962 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 12...	1445	1160	430	7.9	8.5	10.2	170	72	50
DEC 07...	1200	770	610	8.1	1.0	--	240	120	70
JAN 17...	1415	707	510	7.8	1.0	12.2	190	80	55
APR 11...	1600	1470	410	7.7	11.0	9.6	170	72	47
JUL 19...	1615	3130	380	8.0	18.5	8.0	160	57	44

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 12...	11	25	.8	2.4	120	0	98	89	27
DEC 07...	16	35	1.0	2.4	150	0	120	130	41
JAN 17...	12	32	1.0	2.1	130	0	110	92	38
APR 11...	13	23	.8	2.0	120	0	98	84	20
JUL 19...	11	16	.6	1.9	120	0	98	70	11

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 12...	.3	8.5	272	.37	852	.00	.00	50	20
DEC 07...	.2	10	379	.52	788	.11	.00	40	30
JAN 17...	.2	10	306	.42	584	.19	.01	20	30
APR 11...	.2	11	261	.36	1040	.22	.01	120	60
JUL 19...	.2	12	225	.31	1900	.02	.02	50	10

09071100 COLORADO RIVER NEAR GLENWOOD SPRINGS, CO
(Irrigation Network Station)

LOCATION.--Lat 39°34'12", long 107°13'34", Garfield County, Hydrologic Unit 14010001, at Shoshone power plant, 6 mi (10 km) upstream from Glenwood Springs, and 6.5 mi (10.5 km) upstream from Roaring Fork River.

DRAINAGE AREA.--4,560 mi² (11,810 km²), approximately.

PERIOD OF RECORD.--October 1941 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to current year.
WATER TEMPERATURES: May 1949 to current year.

REMARKS.--Discharge obtained by subtracting the daily mean flow in Roaring Fork River at Glenwood Springs (station 09085000) from the daily mean flow in Colorado River below Glenwood Springs (station 09085100).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,260 micromhos Aug. 10, 1947; minimum daily, 153 micromhos May 24, 1948.
WATER TEMPERATURES: Maximum, 22°C July 31, 1954, Aug. 19, 1955, July 31, 1976; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 950 micromhos Nov. 14, 15, 16; minimum daily, 200 micromhos June 13-16.
WATER TEMPERATURES: Maximum daily, 20.0°C Aug. 6-10, Sept. 5; minimum daily, 0.5°C Dec. 13, 1977, Jan. 17, 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 12...	1530	1200	620	7.8	7.0	9.8	200	92	58
NOV 16...	1430	600	950	7.8	4.5	10.0	260	130	75
DEC 13...	1415	650	820	7.6	.5	11.3	230	110	68
JAN 17...	1515	710	820	7.9	.5	11.4	200	92	58
FEB 14...	1515	720	710	7.6	1.5	11.0	190	84	55
MAR 14...	1600	750	750	7.7	4.5	10.0	210	100	61
APR 12...	0745	1500	600	7.6	9.0	9.0	180	68	47
MAY 24...	0745	6500	290	7.2	11.0	8.6	110	36	34
JUN 08...	0745	6800	295	7.2	10.5	9.0	110	37	33
JUL 20...	0745	3100	430	7.5	17.0	7.7	150	51	44
AUG 24...	1545	1400	600	7.8	17.0	7.9	180	76	55

09071100 COLORADO RIVER NEAR GLENWOOD SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 12...	13	61	1.9	2.8	130	0	110	120	83
NOV 16...	17	110	3.0	3.4	160	0	130	140	150
DEC 13...	15	87	2.5	2.9	150	0	120	130	120
JAN 17...	13	81	2.5	2.6	130	0	110	97	120
FEB 14...	13	74	2.3	2.7	130	0	110	92	100
MAR 14...	14	78	2.3	2.9	130	0	110	100	110
APR 12...	14	52	1.7	2.4	130	0	110	96	64
MAY 24...	6.9	18	.7	1.6	94	0	77	43	15
JUN 08...	7.1	14	.6	1.3	91	0	75	48	15
JUL 20...	9.6	28	1.0	1.9	120	0	98	66	38
AUG 24...	11	54	1.7	2.4	130	0	110	86	77

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 12...	.3	8.5	411	.56	1330	.01	.00	60	30
NOV 16...	.2	10	585	.80	948	.03	.00	20	40
DEC 13...	.2	10	508	.69	892	.11	.00	10	30
JAN 17...	.2	10	447	.61	857	.19	.02	20	30
FEB 14...	.3	9.8	412	.56	801	.24	.02	30	30
MAR 14...	.3	8.7	440	.60	891	.11	.00	10	40
APR 12...	.1	11	352	.48	1430	.23	.01	70	80
MAY 24...	.1	11	177	.24	3110	.11	.05	110	60
JUN 08...	.1	9.8	175	.24	3210	.31	.01	120	30
JUL 20...	.2	10	257	.35	2150	.04	.02	100	10
AUG 24...	.2	9.1	359	.49	1360	.04	.00	80	30

09071100 COLORADO RIVER NEAR GLENWOOD SPRINGS, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590	760	760	780	700	680	610	420	260	290	500	570
2	570	760	850	900	680	690	540	430	255	320	510	560
3	590	780	800	840	710	680	530	420	240	310	560	550
4	600	790	740	790	700	690	570	400	240	320	560	540
5	670	750	710	700	750	700	550	385	250	320	600	540
6	630	840	800	710	670	700	530	390	270	340	620	590
7	620	780	840	610	700	700	600	430	260	370	640	560
8	560	770	800	760	700	700	550	450	260	370	650	560
9	580	800	840	740	690	700	530	480	260	360	600	545
10	600	900	830	740	680	680	540	500	230	370	630	530
11	640	840	700	710	700	710	600	480	215	370	655	530
12	610	860	740	740	710	740	580	450	210	370	510	520
13	750	860	810	730	750	700	540	410	200	390	530	500
14	710	950	750	750	750	730	560	360	200	400	500	550
15	710	950	750	740	680	730	510	360	200	380	510	560
16	700	940	750	720	700	750	520	280	200	380	520	540
17	690	900	750	750	780	700	510	290	210	370	520	540
18	830	840	770	720	800	690	490	270	210	360	500	480
19	840	790	840	740	790	740	530	275	215	420	570	550
20	860	800	840	690	750	700	480	295	225	400	600	560
21	870	810	880	740	710	700	500	250	215	390	600	590
22	850	900	900	770	700	700	490	250	230	400	600	570
23	750	890	770	760	750	680	500	250	230	420	560	560
24	540	740	710	750	720	640	540	260	230	430	520	600
25	810	800	650	800	690	700	530	250	230	470	540	560
26	840	760	710	810	670	750	480	240	235	480	540	620
27	840	750	740	720	680	750	410	240	260	480	550	590
28	800	760	730	730	660	730	400	240	260	500	580	610
29	840	760	710	760	---	700	380	240	270	500	600	590
30	820	770	710	780	---	660	400	260	275	460	610	610
31	760	---	650	680	---	650	---	255	---	450	590	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	8.0	4.0	1.0	2.0	4.0	10.0	10.0	10.0	14.0	17.0	16.0
2	12.0	8.0	4.0	1.0	2.0	6.0	9.0	11.0	11.0	13.0	18.0	18.0
3	13.0	8.0	6.0	1.0	1.0	5.0	9.0	12.0	12.0	13.0	19.0	18.0
4	13.0	8.0	6.0	1.0	2.0	4.0	10.0	11.0	11.0	14.0	19.0	17.0
5	13.0	9.0	4.0	1.0	2.0	6.0	9.0	9.0	11.0	15.0	19.0	20.0
6	13.0	12.0	3.0	1.0	3.0	6.0	10.0	8.0	12.0	15.0	20.0	18.0
7	12.0	10.0	4.0	1.0	4.0	6.0	10.0	8.0	11.0	15.0	20.0	18.0
8	11.0	8.0	5.0	1.0	2.0	7.0	12.0	7.0	14.0	16.0	20.0	17.0
9	11.0	5.0	4.0	1.0	2.0	7.0	9.0	10.0	13.0	16.0	20.0	17.0
10	9.0	5.0	4.0	2.0	2.0	7.0	9.0	10.0	13.0	16.0	20.0	17.0
11	8.0	5.0	4.0	2.0	3.0	8.0	10.0	11.0	12.0	17.0	19.0	15.0
12	7.0	5.0	3.0	2.0	3.0	7.0	11.0	11.0	14.0	16.0	19.0	14.0
13	7.0	5.0	3.0	1.0	3.0	6.0	10.0	13.0	15.0	17.0	19.0	12.0
14	8.0	6.0	4.0	1.0	3.0	5.0	10.0	14.0	15.0	17.0	17.0	12.0
15	8.0	7.0	5.0	2.0	2.0	4.0	11.0	14.0	15.0	18.0	17.0	13.0
16	9.0	7.0	5.0	2.0	2.0	3.0	10.0	13.0	15.0	17.0	17.0	17.0
17	9.0	8.0	2.0	2.0	1.0	5.0	10.0	11.0	13.0	18.0	17.0	16.0
18	10.0	8.0	2.0	2.0	1.0	6.0	9.0	9.0	12.0	17.0	17.0	12.0
19	10.0	5.0	2.0	1.0	1.0	7.0	9.0	10.0	14.0	17.0	17.0	11.0
20	9.0	4.0	7.0	2.0	2.0	9.0	10.0	12.0	13.0	17.0	17.0	12.0
21	9.0	3.0	1.0	2.0	3.0	10.0	9.0	11.0	14.0	18.0	17.0	15.0
22	10.0	3.0	1.0	2.0	3.0	9.0	9.0	12.0	14.0	18.0	18.0	10.0
23	9.0	5.0	1.0	2.0	3.0	8.0	10.0	12.0	16.0	18.0	18.0	14.0
24	8.0	5.0	1.0	1.0	3.0	8.0	11.0	12.0	15.0	18.0	18.0	14.0
25	8.0	5.0	1.0	1.0	4.0	7.0	12.0	11.0	14.0	19.0	18.0	15.0
26	8.0	5.0	2.0	1.0	4.0	8.0	12.0	11.0	14.0	18.0	18.0	15.0
27	8.0	6.0	2.0	1.0	4.0	12.0	10.0	11.0	14.0	19.0	18.0	15.0
28	9.0	6.0	1.0	1.0	5.0	11.0	10.0	11.0	14.0	19.0	18.0	15.0
29	9.0	5.0	1.0	1.0	---	11.0	10.0	11.0	14.0	19.0	18.0	15.0
30	9.0	3.0	2.0	2.0	---	10.0	11.0	12.0	15.0	18.0	16.0	14.0
31	9.0	---	1.0	2.0	---	12.0	---	11.0	---	19.0	16.0	---

09071300 GRIZZLY CREEK NEAR GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°43'04", long 107°18'51", in SW¼NW¼ sec.7, T.4 S., R.88 W., Garfield County, Hydrologic Unit 14010001, on left bank 0.8 mi (1.3 km) west of Grizzly Cow Camp and 14 mi (23 km) north of Glenwood Springs.

DRAINAGE AREA.--5.73 mi² (14.84 km²).

PERIOD OF RECORD.--September 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 10,460 ft (3,188 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, about 200 ft³/s (5.66 m³/s), probably occurred June 15, 1978; maximum gage height, 6.41 ft (1.954 m) May 8, 1977 (backwater from ice); minimum daily, no flow Jan. 1 to Mar. 25, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, about 200 ft³/s (5.66 m³/s), June 15; no flow Jan. 1 to Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.30	.20	.00	.00	.00	.30	4.6	90	94	3.9	1.5
2	.52	.30	.20	.00	.00	.00	.20	5.0	100	79	3.6	1.4
3	.47	.30	.20	.00	.00	.00	.20	6.0	120	66	3.3	1.4
4	.47	.30	.20	.00	.00	.00	.30	5.6	110	52	3.1	1.2
5	.47	.30	.20	.00	.00	.00	.40	5.0	100	42	3.0	1.2
6	.53	.30	.20	.00	.00	.00	.60	4.7	100	35	2.9	1.2
7	.80	.30	.20	.00	.00	.00	.80	4.5	110	30	2.9	1.2
8	.72	.30	.20	.00	.00	.00	1.0	4.2	130	27	2.9	1.3
9	.70	.30	.20	.00	.00	.00	1.6	4.0	160	24	2.9	1.2
10	.67	.30	.20	.00	.00	.00	1.2	5.0	180	22	2.9	1.2
11	.64	.30	.20	.00	.00	.00	.80	7.0	170	21	2.9	1.3
12	.60	.30	.20	.00	.00	.00	1.2	10	160	19	2.9	1.3
13	.54	.30	.10	.00	.00	.00	1.4	15	170	16	2.9	1.1
14	.52	.30	.10	.00	.00	.00	1.4	20	180	14	3.1	1.2
15	.52	.30	.10	.00	.00	.00	1.6	30	200	13	3.0	1.2
16	.49	.30	.10	.00	.00	.00	1.6	40	172	12	2.9	1.1
17	.43	.20	.10	.00	.00	.00	1.6	60	146	11	2.9	1.7
18	.43	.20	.10	.00	.00	.00	1.8	54	127	10	2.9	1.7
19	.40	.20	.10	.00	.00	.00	1.8	50	132	9.1	2.8	1.6
20	.30	.20	.10	.00	.00	.00	1.8	45	129	8.5	2.6	1.5
21	.30	.20	.10	.00	.00	.00	1.8	52	136	7.8	2.5	1.4
22	.30	.20	.10	.00	.00	.00	1.8	58	157	7.2	2.4	1.4
23	.30	.20	.10	.00	.00	.00	1.6	64	169	6.8	2.3	1.4
24	.40	.20	.10	.00	.00	.00	2.3	70	189	6.3	2.2	1.3
25	.40	.20	.10	.00	.00	.00	3.0	70	190	5.9	2.1	1.2
26	.50	.20	.10	.00	.00	.10	4.0	69	156	5.4	2.1	1.2
27	.50	.20	.10	.00	.00	.10	6.2	64	139	5.2	2.0	1.1
28	.40	.20	.10	.00	.00	.10	5.6	66	129	4.6	1.8	1.1
29	.40	.20	.10	.00	---	.20	5.0	70	113	4.1	1.6	1.1
30	.40	.20	.10	.00	---	.20	4.6	74	110	4.3	1.5	1.1
31	.30	---	.10	.00	---	.40	---	82	---	4.1	1.5	---
TOTAL	14.94	7.60	4.30	.00	.00	1.10	57.50	1118.6	4276	666.3	82.3	38.8
MEAN	.48	.25	.14	.000	.000	.035	1.92	36.1	143	21.5	2.65	1.29
MAX	.80	.30	.20	.00	.00	.40	6.2	82	200	94	3.9	1.7
MIN	.30	.20	.10	.00	.00	.00	.20	4.0	90	4.1	1.5	1.1
AC-FT	30	15	8.5	.00	.00	2.2	114	2220	8480	1320	163	77

CAL YR 1977 TOTAL 2094.01 MEAN 5.74 MAX 72 MIN .00 AC-FT 4150
WTR YR 1978 TOTAL 6267.44 MEAN 17.2 MAX 200 MIN .00 AC-FT 12430

NOTE.--NO GAGE-HEIGHT RECORD OCT. 19 TO JUNE 15.

09073400 ROARING FORK RIVER NEAR ASPEN, CO

LOCATION.--Lat 39°10'48", long 106°48'05", Pitkin County, Hydrologic Unit 14010004, on right bank 25 ft (8 m) upstream from private bridge, 115 ft (35 m) upstream from Salvation ditch headgate, 1.0 mi (1.6 km) southeast of Aspen, and 2.0 mi (3.2 km) upstream from Hunter Creek.

DRAINAGE AREA.--108 mi² (280 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,014.01 ft (2,442.670 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1968, at site 85 ft (26 m) upstream at datum 1.16 ft (0.354 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversion 14 mi (23 km) upstream through Twin Lakes tunnel to Arkansas River basin since May 24, 1935 (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 136 ft³/s (3.908 m³/s), 98,530 acre-ft/yr (121 hm³/yr), including diversion by Twin Lakes tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft³/s (37.1 m³/s) July 1, 1965, gage height, 5.20 ft (1.585 m), site and datum then in use, from rating curve extended above 770 ft³/s (22 m³/s); minimum daily, 12 ft³/s (0.34 m³/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 712 ft³/s (20.2 m³/s) at 0300 June 25, gage height, 3.37 ft (1.027 m); minimum daily, 15 ft³/s (0.42 m³/s) Jan. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	20	15	18	18	41	60	270	333	72	31
2	23	20	21	18	18	18	36	55	315	267	70	30
3	22	22	21	18	18	18	34	55	324	253	62	31
4	22	22	21	18	18	18	33	54	333	245	60	30
5	22	22	22	19	18	18	36	52	309	231	59	29
6	23	22	22	19	18	19	35	48	273	217	56	29
7	32	22	22	19	16	19	39	46	315	200	53	30
8	30	22	20	19	16	19	48	45	315	167	47	31
9	27	18	20	18	16	20	50	46	354	177	46	28
10	27	20	20	19	16	20	41	45	416	180	45	28
11	24	21	21	18	16	22	39	54	423	155	46	29
12	23	22	21	18	16	22	44	60	451	152	62	28
13	25	20	20	18	16	22	43	70	458	148	66	27
14	25	20	20	18	16	22	43	107	548	140	67	26
15	25	20	20	18	18	20	46	162	576	135	70	25
16	24	20	18	19	16	22	45	225	572	137	62	25
17	23	20	18	18	17	22	45	288	524	151	55	25
18	25	21	20	18	17	22	41	192	440	128	43	25
19	23	20	18	18	18	23	40	157	395	120	37	26
20	23	20	20	18	18	23	40	177	425	117	36	28
21	23	21	19	19	17	23	43	211	434	110	35	26
22	23	22	20	18	17	25	43	190	423	101	34	26
23	22	21	20	18	17	26	40	206	430	103	35	25
24	22	22	20	18	17	25	40	225	444	102	33	24
25	21	21	20	18	18	25	46	231	520	91	33	24
26	21	21	20	18	18	25	57	222	448	86	33	24
27	21	21	20	18	18	25	78	222	370	81	31	24
28	21	20	20	18	18	25	68	200	351	79	31	24
29	21	20	20	18	---	26	63	182	342	78	30	23
30	22	20	20	18	---	30	64	211	370	79	30	24
31	20	---	19	17	---	36	---	248	---	70	30	---
TOTAL	727	622	623	561	480	698	1361	4346	12166	4653	1469	805
MEAN	23.5	20.7	20.1	18.1	17.1	22.5	45.4	140	406	150	47.4	26.8
MAX	32	22	22	19	18	36	78	288	576	333	72	31
MIN	20	18	18	15	16	18	33	45	270	70	30	23
AC-FT	1440	1230	1240	1110	952	1380	2700	8620	24130	9230	2910	1600

CAL YR 1977 TOTAL 14827 MEAN 40.6 MAX 260 MIN 14 AC-FT 29410
WTR YR 1978 TOTAL 28511 MEAN 78.1 MAX 576 MIN 15 AC-FT 56550

09073700 HUNTER CREEK ABOVE MIDWAY CREEK, NEAR ASPEN, CO

LOCATION.--Lat 39°12'50", long 106°39'19", Pitkin County, Hydrologic Unit 14010004, on right bank 2.8 mi (4.5 km) upstream from Midway Creek and 9 mi (14 km) east of Aspen.

DRAINAGE AREA.--6.18 mi² (16.01 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 10,500 ft (3,200 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No regulation or diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 14.4 ft³/s (0.408 m³/s), 10,430 acre-ft/yr (12.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 580 ft³/s (16.4 m³/s) June 26, 1973, gage height, 3.18 ft (0.969 m), from rating curve extended above 130 ft³/s (3.7 m³/s); minimum daily determined, 0.30 ft³/s (0.008 m³/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 15	2100	*273	7.73	2.97	0.905	June 24	1900	251	7.11	2.85	0.872

Minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	2.1	1.4	1.0	1.1	1.0	1.8	4.2	45	100	15	2.8
2	3.2	2.0	1.5	.80	.90	1.1	2.2	4.0	53	89	13	3.0
3	2.8	1.9	1.6	1.0	1.0	1.1	2.6	4.0	56	85	11	2.9
4	2.6	1.9	1.6	1.1	1.2	1.1	3.0	4.2	53	73	9.6	2.6
5	3.1	1.9	1.6	1.3	1.0	1.1	3.2	4.2	39	64	8.6	2.4
6	4.1	1.8	1.3	1.3	1.1	1.0	3.8	4.8	43	58	8.2	2.5
7	5.8	1.8	1.7	1.3	1.1	1.0	3.4	3.8	53	57	7.9	2.8
8	5.2	1.8	1.5	1.0	1.1	1.0	3.2	3.6	50	56	8.0	2.9
9	5.5	1.9	1.3	1.3	1.1	1.1	3.0	3.4	81	61	7.8	2.6
10	3.8	1.6	1.5	1.3	1.1	1.3	3.2	3.6	129	61	7.6	3.1
11	3.0	1.6	1.4	1.2	1.0	1.2	3.6	3.8	122	57	7.5	3.6
12	2.5	1.7	1.5	1.2	1.0	1.2	4.0	4.0	121	53	7.7	2.7
13	2.3	1.7	1.3	1.2	1.0	1.1	4.8	5.0	141	48	8.7	2.2
14	2.2	1.7	1.5	1.1	.90	1.1	4.6	8.0	152	45	9.0	2.0
15	2.2	1.6	1.4	1.2	.90	1.1	3.8	10	172	45	9.5	1.9
16	2.2	1.6	1.4	1.2	.90	1.0	3.8	12	148	44	7.3	1.8
17	2.2	1.6	1.1	1.2	.70	1.0	4.2	16	123	54	6.2	2.0
18	2.2	1.6	1.4	1.2	.80	1.1	4.4	12	111	40	5.8	2.1
19	2.0	1.6	1.3	1.0	.90	1.1	4.2	10	116	33	5.2	2.4
20	2.0	1.4	1.1	1.2	.90	1.2	4.2	12	124	31	5.0	2.5
21	2.2	1.5	1.0	1.1	.90	1.2	4.2	14	138	31	5.0	2.3
22	2.2	1.7	1.1	1.1	.80	1.2	4.4	16	153	25	5.2	2.0
23	2.2	1.6	1.2	1.1	.80	1.3	4.0	18	154	22	4.8	1.9
24	2.2	1.6	1.4	1.0	.90	1.4	4.0	20	161	20	4.4	1.7
25	2.0	1.6	1.3	1.0	1.0	1.5	4.8	22	163	18	4.9	1.6
26	1.9	1.5	1.2	1.2	1.0	1.6	5.0	20	126	17	4.5	1.5
27	1.9	1.5	1.2	1.1	.90	1.7	4.8	20	112	18	3.9	1.3
28	1.8	1.6	1.4	.90	.90	1.6	4.6	16	105	17	3.6	1.2
29	1.8	1.5	1.3	1.1	---	1.6	4.4	12	107	16	3.3	1.2
30	1.8	1.5	1.3	1.1	---	1.5	4.4	14	134	14	3.0	1.1
31	2.1	---	1.3	1.0	---	1.4	---	39	---	13	3.0	---
TOTAL	84.5	50.4	42.1	34.80	26.90	37.9	115.6	343.6	3287	1365	214.2	66.8
MEAN	2.73	1.68	1.36	1.12	.96	1.22	3.85	11.1	110	44.0	6.91	2.23
MAX	5.8	2.1	1.7	1.3	1.2	1.7	5.0	39	172	100	15	3.6
MIN	1.8	1.4	1.0	.80	.70	1.0	1.8	3.4	39	13	3.0	1.1
AC-FT	168	100	84	69	53	75	229	682	6520	2710	425	132

CAL YR 1977 TOTAL 2668.02 MEAN 7.31 MAX 110 MIN .33 AC-FT 5290
WTR YR 1978 TOTAL 5668.80 MEAN 15.5 MAX 172 MIN .70 AC-FT 11240

NOTE.--NO GAGE-HEIGHT RECORD NOV. 9 TO MAY 29.

09073800 MIDWAY CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°11'47", long 106°41'22", Pitkin County, Hydrologic Unit 14010004, on right bank 1,700 ft (520 m) upstream from mouth and 5.7 mi (9.2 km) east of Aspen.

DRAINAGE AREA.--8.62 mi^2 (22.33 km^2).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 10,080 ft (3,072 m), from topographic map.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. A temporary diversion structure 0.2 mi (0.3 km) above gage diverted a varying amount of flow around gage to a point 150 ft (45.7 m) below station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years (water years 1971-1976), 13.0 ft^3/s (0.368 m^3/s), 9,420 acre-ft/yr (11.6 hm^3/yr). Water year 1977 omitted because of a diversion around the gage during construction of a diversion structure 0.2 mi (0.3 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft^3/s (8.21 m^3/s) June 17, 1971, gage height, 3.17 ft (0.966 m), from floodmarks, from rating curve extended above 140 ft^3/s (4.0 m^3/s); minimum daily, 0.20 ft^3/s (0.006 m^3/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 198 ft^3/s (5.61 m^3/s) at 2000 June 15, gage height, 2.62 ft (0.799 m), only peak above base of 90 ft^3/s (2.5 m^3/s); minimum daily, 1.0 ft^3/s (0.028 m^3/s) Mar. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.5	2.0	1.5	1.3	1.2	2.6	8.0	53	90	10	2.2
2	4.0	4.5	2.0	1.5	1.2	1.2	3.8	7.0	63	82	9.6	2.2
3	3.6	4.7	2.0	1.6	1.2	1.2	3.8	6.5	67	76	8.1	2.2
4	3.6	4.7	2.0	1.5	1.2	1.2	2.8	7.0	66	66	6.7	2.2
5	3.8	4.7	2.0	1.5	1.3	1.2	2.4	8.5	53	58	6.3	2.1
6	4.5	4.5	2.0	1.5	1.4	1.2	2.0	9.5	50	52	5.8	2.0
7	5.5	4.3	2.0	1.4	1.4	1.2	2.2	9.0	61	49	5.6	2.6
8	5.8	4.0	2.0	1.4	1.4	1.2	2.4	8.0	68	46	5.4	3.0
9	6.5	3.6	2.0	1.4	1.4	1.3	3.0	6.5	97	49	5.4	2.4
10	5.2	3.4	2.0	1.4	1.4	1.3	3.6	5.5	129	51	4.9	2.6
11	6.5	3.2	2.0	1.4	1.4	1.2	4.6	7.0	132	47	4.7	2.8
12	6.3	3.2	2.0	1.4	1.4	1.2	3.6	10	132	41	4.7	2.4
13	5.6	3.2	2.0	1.4	1.4	1.1	3.6	12	140	35	5.6	2.2
14	5.5	3.0	1.9	1.4	1.4	1.1	4.0	15	152	32	5.6	2.2
15	5.5	3.0	.1.9	1.4	1.3	1.0	4.0	17	163	31	6.5	2.0
16	5.5	3.0	1.9	1.4	1.3	1.1	3.6	19	145	32	4.9	2.0
17	5.5	2.8	2.0	1.4	1.3	1.1	3.8	22	130	44	4.2	2.2
18	5.0	2.6	1.9	1.5	1.3	1.2	4.4	30	120	28	3.8	2.2
19	5.0	2.6	1.9	1.5	1.4	1.2	4.4	40	124	24	3.8	2.5
20	5.0	2.4	1.8	1.5	1.4	1.3	4.0	50	125	22	3.5	2.5
21	4.7	2.2	1.8	1.5	1.3	1.3	3.8	55	128	21	3.3	2.6
22	4.5	2.2	1.8	1.5	1.2	1.3	4.0	32	133	18	3.3	2.1
23	4.5	2.2	1.9	1.5	1.1	1.3	4.4	32	134	17	3.1	2.0
24	4.5	2.2	1.8	1.5	1.1	1.3	4.0	36	132	15	2.8	1.9
25	4.5	2.2	1.7	1.6	1.2	1.2	4.0	40	137	13	3.0	1.8
26	4.5	2.2	1.6	1.6	1.2	1.3	5.0	46	119	13	2.8	1.7
27	4.5	2.2	1.6	1.5	1.2	1.4	6.0	55	103	12	2.6	1.6
28	4.5	2.2	1.5	1.4	1.2	1.5	7.0	60	98	12	2.5	1.6
29	4.0	2.2	1.5	1.4	---	1.6	8.0	60	102	12	2.4	1.5
30	4.0	2.2	1.5	1.4	---	1.8	9.5	60	116	10	2.4	1.5
31	4.5	---	1.5	1.4	---	2.0	---	60	---	9.6	2.2	---
TOTAL	150.4	93.9	57.5	45.3	36.3	39.7	124.3	833.5	3272	1107.6	145.5	64.8
MEAN	4.85	3.13	1.85	1.46	1.30	1.28	4.14	26.9	109	35.7	4.69	2.16
MAX	6.5	4.7	2.0	1.6	1.4	2.0	9.5	60	163	90	10	3.0
MIN	3.6	2.2	1.5	1.4	1.1	1.0	2.0	5.5	50	9.6	2.2	1.5
AC-FT	298	186	114	90	72	79	247	1650	6490	2200	289	129

CAL YR 1977 TOTAL 2234.18 MEAN 6.12 MAX 53 MIN .25 AC-FT 4430
WTR YR 1978 TOTAL 5970.80 MEAN 16.4 MAX 163 MIN 1.0 AC-FT 11840

NOTE.--NO GAGE-HEIGHT RECORD NOV. 8 TO MAY 13.

09073900 NO NAME CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°11'20", long 106°43'04", Pitkin County, Hydrologic Unit 14010004, on right bank 0.6 mi (1.0 km) upstream from mouth and 4.5 mi (7.2 km) east of Aspen.

DRAINAGE AREA.--6.54 mi² (16.94 km²).

PERIOD OF RECORD.--October 1970 to current year. Low-flow records not equivalent prior to Aug. 2, 1972, due to inflow between the sites.

GAGE.--Water-stage recorder. Altitude of gage is 10,000 ft (3,048 m), from topographic map. Prior to Aug. 2, 1972, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years, 8.50 ft³/s (0.241 m³/s), 6,160 acre-ft/yr (7.60 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 163 ft³/s (4.62 m³/s) June 17, 1971, gage height, 5.48 ft (1.670 m), site and datum then in use, from rating curve extended above 85 ft³/s (2.4 m³/s); minimum daily, 0.16 ft³/s (0.005 m³/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft³/s (3.37 m³/s) at 2000 June 15, gage height, 2.88 ft (0.878 m), only peak above base of 90 ft³/s (2.5 m³/s); minimum daily, 0.50 ft³/s (0.014 m³/s) Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.90	.80	.70	.70	.60	.70	6.0	62	44	3.3	.95
2	1.5	.90	.80	.70	.70	.60	.80	7.0	65	39	3.8	.95
3	1.4	.90	.80	.70	.70	.60	.90	5.0	64	36	2.7	.95
4	1.4	.80	.80	.70	.60	.60	1.1	4.4	64	32	2.4	.95
5	1.4	1.0	.80	.60	.60	.60	1.1	4.4	58	29	2.2	.92
6	1.6	1.2	.80	.60	.60	.60	1.1	4.8	58	27	2.0	.89
7	2.3	1.2	.80	.60	.60	.60	1.1	6.0	62	24	1.9	1.0
8	2.0	1.2	.80	.60	.60	.60	1.1	6.0	63	22	1.8	1.5
9	1.7	1.1	.80	.60	.60	.60	1.1	6.0	67	23	1.7	1.1
10	1.6	1.1	.80	.60	.60	.60	1.2	5.0	77	23	1.6	1.1
11	1.5	1.0	.80	.50	.60	.60	1.3	4.6	81	22	1.6	1.1
12	1.4	.90	.80	.60	.60	.60	1.4	4.0	81	19	1.6	1.0
13	1.4	.90	.80	.60	.60	.70	1.5	3.8	85	15	1.7	.98
14	1.3	.90	.80	.60	.60	.70	1.5	4.8	86	13	1.9	.95
15	1.3	.90	.80	.60	.70	.70	1.6	5.5	88	13	2.5	.98
16	1.2	1.0	.80	.60	.70	.70	1.7	6.0	89	14	1.9	.95
17	1.2	.90	.70	.60	.70	.70	1.7	9.0	80	17	1.5	.98
18	1.1	.90	.70	.60	.70	.60	1.8	15	77	11	1.4	1.0
19	1.1	.90	.70	.60	.60	.60	1.8	25	78	9.0	1.3	1.1
20	1.0	.80	.70	.60	.60	.60	1.8	35	77	8.0	1.3	1.2
21	1.0	.80	.70	.60	.60	.60	1.9	37	74	6.9	1.3	1.1
22	.90	.80	.70	.60	.70	.60	1.9	33	74	5.8	1.2	1.1
23	.90	.80	.70	.60	.70	.70	1.9	39	71	5.3	1.3	1.0
24	.90	.80	.70	.70	.70	.70	2.0	51	69	4.6	1.2	.98
25	1.0	.70	.70	.70	.70	.70	2.0	53	66	4.3	1.1	.98
26	1.0	.80	.70	.70	.60	.70	2.2	52	58	4.2	1.1	.95
27	1.0	.80	.80	.70	.60	.70	2.4	53	54	3.6	1.1	.92
28	1.0	.80	.80	.70	.60	.70	2.6	42	51	3.5	1.0	.89
29	1.0	.80	.70	.70	---	.70	3.0	40	54	3.5	.98	.86
30	.90	.80	.70	.70	---	.70	4.0	52	53	3.4	.98	.83
31	.90	---	.70	.70	---	.70	---	59	---	2.9	.95	---
TOTAL	39.30	27.30	23.50	19.70	17.90	20.00	50.20	678.3	2086	488.0	52.31	30.16
MEAN	1.27	.91	.76	.64	.64	.65	1.67	21.9	69.5	15.7	1.69	1.01
MAX	2.3	1.2	.80	.70	.70	.70	4.0	59	89	44	3.8	1.5
MIN	.90	.70	.70	.50	.60	.60	.70	3.8	51	2.9	.95	.83
AC-FT	78	54	47	39	36	40	100	1350	4140	968	104	60

CAL YR 1977 TOTAL 1502.02 MEAN 4.12 MAX 42 MIN .17 AC-FT 2980
WTR YR 1978 TOTAL 3532.67 MEAN 9.68 MAX 89 MIN .50 AC-FT 7010

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO MAY 20.

09074000 HUNTER CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°12'21", long 106°47'49", Pitkin County, Hydrologic Unit 14010004, on right bank 280 ft (85 m) upstream from headgate of Red Mountain ditch, 1.5 mi (2.4 km) upstream from mouth, and 1.5 mi (2.4 km) northeast of Aspen.

DRAINAGE AREA.--41.1 mi² (106.4 km²).

PERIOD OF RECORD.--June 1950 to September 1956, September 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,610 ft (2,624 m), from topographic map. Prior to Sept. 1, 1969, at site 220 ft (67 m) downstream at different datum.

REMARKS.--Records good except for those for winter period and period of no gage-height record, which are poor. Several small diversions above station for irrigation of hay meadows above and below station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years (water years 1951-56, 1970-78), 49.9 ft³/s (1.413 m³/s), 36,150 acre-ft/yr (44.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft³/s (28.6 m³/s) June 13, 1953, gage height, 7.02 ft (2.140 m), site and datum then in use, from rating curve extended above 580 ft³/s (16 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 672 ft³/s (19.0 m³/s) at 2200 June 15, gage height, 2.66 ft (0.811 m), only peak above base of 450 ft³/s (13 m³/s); minimum daily, 5.0 ft³/s (0.142 m³/s) Jan. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	7.1	7.0	6.0	6.0	6.5	11	24	266	252	35	9.2
2	8.8	7.5	7.0	5.5	6.5	6.5	9.9	23	300	224	36	9.2
3	8.8	7.8	7.0	6.0	6.0	6.5	9.6	23	316	220	29	9.2
4	8.5	7.8	7.0	6.0	6.0	6.5	10	24	316	203	23	8.5
5	8.5	7.8	7.0	6.0	6.0	6.5	10	23	262	178	21	8.8
6	9.6	8.1	7.0	5.5	6.5	6.5	12	21	259	161	19	9.9
7	14	8.1	7.0	5.5	6.5	6.5	13	20	296	150	20	10
8	12	8.0	7.0	5.5	6.5	6.5	14	18	288	144	20	13
9	11	8.0	7.0	6.0	6.5	6.5	14	24	372	154	19	12
10	11	8.0	7.0	6.0	6.5	7.0	12	30	485	161	16	11
11	8.5	8.0	7.0	5.5	7.0	6.8	11	35	475	147	14	12
12	8.1	8.5	7.0	5.0	7.0	7.0	12	39	475	137	14	12
13	9.6	7.5	6.5	5.5	6.5	6.5	12	49	495	120	16	12
14	9.6	7.0	6.5	6.0	6.5	6.0	12	87	515	113	16	12
15	9.6	6.8	7.0	6.0	6.0	6.0	12	144	540	116	21	11
16	9.2	6.8	7.0	6.0	6.5	6.0	13	192	500	109	18	11
17	9.2	6.8	7.0	6.0	6.5	6.0	14	200	424	100	14	11
18	8.8	6.8	7.0	6.0	7.0	6.5	16	154	404	90	14	11
19	8.5	6.5	6.5	6.5	7.0	7.0	14	130	384	80	12	12
20	8.5	6.5	6.5	6.5	7.0	7.5	13	140	396	70	11	12
21	8.8	6.5	6.5	6.5	7.0	8.0	14	158	384	65	10	12
22	8.8	6.5	7.0	6.5	6.5	8.0	14	144	368	65	9.6	12
23	8.5	6.5	7.0	6.5	6.5	8.1	14	186	388	60	11	12
24	7.8	6.5	7.5	6.5	6.0	8.1	14	242	380	55	11	12
25	7.8	6.8	6.5	6.5	6.0	8.0	18	252	384	48	11	11
26	7.8	6.8	6.0	6.5	6.5	7.8	23	245	328	42	11	11
27	7.8	7.0	6.5	6.5	6.5	8.5	32	245	280	41	9.9	11
28	7.4	7.1	6.0	7.0	6.5	9.2	29	178	270	39	9.6	10
29	7.4	7.1	6.0	7.0	---	7.1	26	161	270	38	9.2	10
30	7.8	7.0	6.0	6.5	---	8.5	25	228	308	36	9.6	9.9
31	7.1	---	6.5	6.0	---	9.6	---	259	---	32	8.2	---
TOTAL	277.6	217.2	209.5	189.0	181.5	221.7	453.5	3698	11148	3450	498.1	327.7
MEAN	8.95	7.24	6.76	6.10	6.48	7.15	15.1	119	372	111	16.1	10.9
MAX	14	8.5	7.5	7.0	7.0	9.6	32	259	540	252	36	13
MIN	7.1	6.5	6.0	5.0	6.0	6.0	9.6	18	259	32	8.2	8.5
AC-FT	551	431	416	375	360	440	900	7330	22110	6840	988	650

CAL YR 1977 TOTAL 8268.9 MEAN 22.7 MAX 248 MIN 1.9 AC-FT 16400
WTR YR 1978 TOTAL 20871.8 MEAN 57.2 MAX 540 MIN 5.0 AC-FT 41400

NOTE.--NO GAGE-HEIGHT RECORD NOV. 4 TO JAN. 12.

09074800 CASTLE CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°05'15", long 106°48'42", Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi (0.6 km) downstream from Forest Service bridge, 0.4 mi (0.6 km) upstream from Sandy Creek, and 7 mi (11 km) south of Aspen.

DRAINAGE AREA.--32.2 mi² (83.4 km²).

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,100 ft (2,774 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 37.7 ft³/s (1.068 m³/s), 27,310 acre-ft/yr (33.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft³/s (12.1 m³/s) June 14, 1973, gage height, 3.75 ft (1.143 m); maximum gage height, 3.88 ft (1.183 m) June 23, 1970; minimum daily discharge, 6.5 ft³/s (0.18 m³/s) Mar. 15, 25, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 15	2300	*405	11.5	3.86	1.177	June 24	2200	332	9.40	3.60	1.097

Minimum daily discharge, 6.5 ft³/s (0.18 m³/s) Mar. 15, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	8.0	8.0	7.3	6.7	6.9	14	81	169	50	22
2	12	10	8.3	8.0	7.0	6.7	6.9	14	103	161	48	22
3	12	10	8.2	7.9	7.4	6.8	7.0	14	112	150	45	21
4	12	9.7	8.2	7.9	7.3	6.7	7.0	15	122	133	40	21
5	12	9.4	8.1	7.9	7.1	6.6	7.1	15	111	121	38	21
6	12	9.1	7.7	7.9	7.2	6.7	7.2	16	99	115	37	20
7	14	9.0	8.1	7.9	7.1	6.6	7.4	16	109	113	37	21
8	12	8.5	8.0	7.9	7.1	6.6	7.7	16	113	118	37	21
9	12	7.8	7.7	7.9	7.1	6.6	7.7	15	143	124	34	21
10	12	8.0	8.1	7.9	7.0	6.6	7.6	16	192	128	34	21
11	12	8.4	8.1	7.9	7.0	6.6	7.7	17	226	134	33	22
12	12	8.4	8.2	7.9	7.0	6.6	8.0	17	204	136	33	21
13	12	8.4	7.9	7.9	7.0	6.6	8.1	19	230	122	38	21
14	11	8.4	8.2	7.8	7.0	6.6	8.4	23	254	110	40	20
15	11	8.4	8.1	7.8	7.0	6.5	8.6	31	262	109	35	20
16	11	8.3	7.9	7.8	7.0	6.6	8.8	57	248	110	31	19
17	11	8.3	7.6	7.8	7.0	6.6	8.8	65	202	140	29	19
18	11	8.4	8.2	7.8	7.0	6.6	8.5	47	162	103	29	19
19	11	8.4	8.0	7.5	6.8	6.6	8.7	42	196	91	28	19
20	11	7.9	7.9	7.7	6.9	6.6	9.0	47	200	88	26	19
21	11	8.1	8.0	7.7	6.8	6.6	9.4	59	194	88	26	18
22	11	8.4	8.0	7.6	6.8	6.6	9.3	52	210	77	26	18
23	11	8.4	8.2	7.4	6.8	6.6	9.6	59	216	67	26	17
24	11	8.3	8.1	7.5	6.8	6.6	10	67	228	64	25	17
25	11	8.4	8.0	7.5	6.8	6.5	11	71	246	63	25	17
26	11	8.4	8.0	7.5	6.7	6.6	12	67	196	62	25	16
27	11	8.3	8.1	7.5	6.6	6.6	12	72	176	60	24	16
28	11	8.3	8.0	7.4	6.7	6.6	12	60	180	58	23	16
29	11	8.2	8.0	7.4	---	6.7	13	53	176	58	23	15
30	11	8.2	8.0	7.4	---	6.8	13	59	190	56	23	15
31	11	---	8.1	7.4	---	6.9	---	68	---	52	22	---
TOTAL	356	258.8	249.0	239.4	195.3	205.6	268.4	1203	5401	3180	990	575
MEAN	11.5	8.63	8.03	7.72	6.98	6.63	8.95	38.8	180	103	31.9	19.2
MAX	14	11	8.3	8.0	7.4	6.9	13	72	262	169	50	22
MIN	11	7.8	7.6	7.4	6.6	6.5	6.9	14	81	52	22	15
AC-FT	706	513	494	475	387	408	532	2390	10710	6310	1950	1140

CAL YR 1977 TOTAL 6637.2 MEAN 18.2 MAX 122 MIN 7.3 AC-FT 13160
WTR YR 1978 TOTAL 13121.5 MEAN 35.9 MAX 262 MIN 6.5 AC-FT 26030

09075700 MAROON CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°07'25", long 106°54'17", Pitkin County, Hydrologic Unit 14010004, on left bank 0.3 mi (0.5 km) upstream from Silver Queen Forest Service campground, 1.2 mi (1.9 km) downstream from confluence of East and West Maroon Creeks, and 7.2 mi (11.6 km) southwest of Aspen.

DRAINAGE AREA.--35.4 mi² (91.7 km²).

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,720 ft (2,658 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Natural regulation by Maroon Lake. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 58.6 ft³/s (1.660 m³/s), 42,460 acre-ft/yr (52.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 716 ft³/s (20.3 m³/s) June 29, 1973, gage height, 3.33 ft (1.015 m), from rating curve extended above 350 ft³/s (9.9 m³/s); maximum gage height, 4.53 ft (1.381 m) Feb. 3, 1972 (backwater from ice); minimum daily discharge, 9.0 ft³/s (0.25 m³/s) Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 589 ft³/s (16.7 m³/s) at 0030 June 14, gage height, 3.26 ft (0.994 m), only peak above base of 250 ft³/s (7.1 m³/s); minimum daily, 9.5 ft³/s (0.27 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	16	12	10	10	11	13	16	91	329	128	45
2	20	16	13	9.5	10	12	13	16	108	304	118	44
3	19	16	13	10	10	12	12	17	119	294	113	43
4	19	16	12	11	10	12	12	17	128	261	108	43
5	19	15	12	11	10	12	12	16	125	241	103	42
6	19	16	12	11	10	12	12	16	126	244	98	43
7	20	16	12	11	10	12	12	16	142	243	95	43
8	19	16	12	11	10	12	13	15	163	259	93	42
9	19	17	13	11	10	11	13	15	201	250	89	42
10	19	16	13	11	10	11	13	14	228	245	85	42
11	19	15	13	11	10	11	12	15	271	251	81	42
12	19	15	13	11	11	11	13	15	309	255	77	42
13	18	15	12	11	11	11	13	16	394	252	77	41
14	18	15	12	11	11	11	13	18	387	249	80	40
15	18	15	12	11	12	11	13	20	404	254	76	39
16	18	15	12	10	13	11	13	23	424	255	69	40
17	18	15	12	10	12	12	13	25	367	263	66	40
18	17	15	12	10	11	12	13	27	344	247	66	40
19	17	15	12	10	11	12	13	31	358	240	54	40
20	17	15	11	10	12	12	13	32	381	234	51	39
21	17	14	10	10	11	12	13	37	380	228	59	38
22	17	14	11	10	11	12	13	39	421	213	58	38
23	17	14	12	10	11	12	13	42	374	195	56	37
24	17	14	12	10	11	12	13	48	404	180	54	37
25	17	14	12	10	11	12	14	58	441	167	53	37
26	17	14	12	10	11	12	15	63	427	161	51	37
27	17	14	12	10	11	12	16	72	368	155	50	37
28	17	14	12	10	11	12	15	73	376	153	49	36
29	17	14	12	10	---	12	16	73	379	150	48	36
30	16	14	12	10	---	12	16	76	354	148	47	36
31	17	---	12	10	---	13	---	82	---	139	45	---
TOTAL	558	450	374	321.5	302	364	398	1043	8994	7060	2317	1201
MEAN	18.0	15.0	12.1	10.4	10.8	11.7	13.3	33.6	300	228	74.7	40.0
MAX	20	17	13	11	13	13	16	82	441	329	128	45
MIN	16	14	10	9.5	10	11	12	14	91	139	45	36
AC-FT	1110	893	742	638	599	722	789	2070	17840	14000	4600	2380

CAL YR 1977 TOTAL 9633.0 MEAN 26.4 MAX 143 MIN 10 AC-FT 19110
WTR YR 1978 TOTAL 23382.5 MEAN 64.1 MAX 441 MIN 9.5 AC-FT 46380

09076520 OWL CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°13'25", long 106°52'45", in NE¼SE¼ sec.33, T.9 S., R.85 W., Pitkin County, Hydrologic Unit 14010004, on left bank 1.2 mi (1.9 km) upstream from mouth and 3.8 mi (6.1 km) northwest of Aspen.

DRAINAGE AREA.--6.60 mi² (17.09 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder with V-notch concrete control. Altitude of gage is 7,870 ft (2,399 m), from topographic map.

REMARKS.--Records good. Several small diversions above station for irrigation of hay meadows. Water imported above station, at times, from West Willow Creek through Willow and Owl ditches. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 35 ft³/s (0.99 m³/s) May 22, 1975, gage height unknown; no flow Feb. 9 to Mar. 6, Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21 ft³/s (0.59 m³/s) at 0300 May 17, gage height, 1.74 ft (0.530 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Dec. 11, Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.08	.11	.14	.14	.15	2.8	6.0	10	1.3	1.0	.07
2	.18	.08	.12	.14	.14	.15	2.4	6.2	7.5	.75	1.3	.07
3	.15	.08	.12	.14	.14	.16	2.1	7.0	6.2	1.0	.75	.07
4	.16	.08	.12	.14	.14	.16	2.5	7.9	7.9	1.5	.61	.07
5	.16	.08	.10	.14	.14	.18	2.2	7.5	7.7	1.0	.48	.06
6	.16	.08	.10	.14	.14	.18	2.8	6.8	6.6	1.2	.40	.05
7	.22	.08	.11	.15	.15	.21	3.4	6.0	6.2	1.2	.32	.09
8	.15	.08	.09	.15	.15	.21	3.9	6.0	5.7	1.1	.27	.11
9	.11	.08	.10	.15	.15	.21	3.4	5.7	4.9	1.1	.25	.09
10	.09	.08	.07	.15	.15	.21	2.4	6.0	6.2	1.3	.21	.07
11	.09	.08	.04	.15	.15	.19	2.6	6.4	7.5	1.7	.21	.09
12	.09	.08	.10	.15	.15	.19	3.4	6.6	6.0	1.2	.19	.09
13	.11	.08	.11	.15	.14	.19	3.0	8.2	4.8	1.7	.21	.09
14	.09	.08	.11	.15	.14	.19	2.6	11	4.4	.95	.22	.09
15	.08	.07	.11	.15	.14	.19	3.1	16	4.6	.45	.40	.08
16	.09	.08	.11	.15	.14	.18	3.7	20	4.8	.88	.22	.08
17	.06	.07	.09	.15	.12	.19	3.7	20	3.7	1.5	.15	.09
18	.06	.08	.08	.15	.12	.21	3.1	18	2.6	.82	.11	.12
19	.07	.08	.11	.15	.12	.22	2.6	15	2.1	.82	.12	.18
20	.07	.08	.11	.14	.12	.20	2.8	12	1.9	1.6	.11	.21
21	.08	.07	.11	.14	.12	.20	2.9	15	1.9	1.2	.09	.18
22	.09	.08	.11	.14	.12	.20	2.9	15	1.5	1.2	.08	.16
23	.09	.09	.12	.12	.12	.20	2.9	12	1.1	1.2	.08	.15
24	.09	.09	.12	.12	.12	.18	3.0	14	1.1	1.1	.06	.15
25	.09	.09	.14	.12	.12	.32	3.7	13	1.1	.88	.06	.15
26	.09	.11	.14	.12	.12	.35	5.3	13	1.3	.61	.05	.16
27	.09	.11	.14	.12	.14	.43	6.0	13	1.5	.68	.06	.15
28	.08	.11	.14	.12	.14	.68	6.0	13	1.2	1.1	.04	.16
29	.08	.09	.14	.14	---	1.2	6.0	10	1.2	.95	.05	.15
30	.08	.09	.14	.14	---	1.5	6.4	9.6	1.8	1.0	.05	.15
31	.08	---	.14	.14	---	2.1	---	10	---	.82	.05	---
TOTAL	3.31	2.51	3.45	4.35	3.78	11.13	103.6	335.9	125.0	33.81	8.20	3.43
MEAN	.11	.084	.11	.14	.14	.36	3.45	10.8	4.17	1.09	.26	.11
MAX	.22	.11	.14	.15	.15	2.1	6.4	20	10	1.7	1.3	.21
MIN	.06	.07	.04	.12	.12	.15	2.1	5.7	1.1	.45	.04	.05
AC-FT	6.6	5.0	6.8	8.6	7.5	22	205	666	248	67	16	6.8

CAL YR 1977 TOTAL 71.61 MEAN .20 MAX 2.3 MIN .00 AC-FT 142
WTR YR 1978 TOTAL 638.47 MEAN 1.75 MAX 20 MIN .04 AC-FT 1270

09077150 FRYINGPAN RIVER FEEDER CANAL NEAR NORRIE, CO

LOCATION.--Lat 39°14'42", long 106°31'47", Pitkin County, Hydrologic Unit 14010004, on right bank 210 ft (64 m) downstream from diversion point on Fryingpan River and 9.1 mi (14.6 km) southeast of Norrie.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 9,955.91 ft (3,034.561 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. This is a transmountain diversion from Marten Creek and Fryingpan River in Roaring Fork River basin through Charles H. Boustead tunnel to Arkansas River basin. Water is for municipal and irrigation use in the Southeastern Colorado Water Conservancy District. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 269 ft^3/s (7.62 m^3/s) June 15, 1978; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	92	179	33	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	105	169	32	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	116	160	27	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	102	148	22	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	95	131	16	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	98	121	13	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	111	115	12	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	110	114	9.7	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	152	119	8.4	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	202	125	8.8	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	216	121	8.8	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	217	119	9.7	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	232	109	11	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	249	104	12	.00
15	.00	.00	.00	.00	.00	.00	.00	13	269	99	15	.00
16	.00	.00	.00	.00	.00	.00	.00	35	263	95	10	.00
17	.00	.00	.00	.00	.00	.00	.00	39	235	114	3.5	.00
18	.00	.00	.00	.00	.00	.00	.00	21	212	94	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	21	218	85	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	33	219	77	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	39	224	73	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	37	237	64	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	57	242	56	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	76	254	51	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	78	260	47	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	78	226	43	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	77	202	42	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	59	194	41	.00	.00
29	.00	.00	.00	.00	---	.00	.00	55	190	38	.00	.00
30	.00	.00	.00	.00	---	.00	.00	68	193	34	.00	.00
31	.00	---	.00	.00	---	.00	---	83	---	29	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	869.00	5735	2917	251.90	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	28.0	191	94.1	8.13	.000
MAX	.00	.00	.00	.00	.00	.00	.00	83	269	179	33	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	92	29	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	1720	11380	5790	500	.00

CAL YR 1977 TOTAL 2292.50 MEAN 6.28 MAX 173 MIN .00 AC-FT 4550
WTR YR 1978 TOTAL 9772.90 MEAN 26.8 MAX 269 MIN .00 AC-FT 19380

09077200 FRYINGPAN RIVER NEAR IVANHOE LAKE, CO

LOCATION.--Lat 39°14'42", long 106°31'50", Pitkin County, Hydrologic Unit 14010004, on left bank 100 ft (30 m) downstream from diversion dam, 2.0 mi (3.2 km) southwest of Ivanhoe Lake, and 9.1 mi (14.6 km) southeast of Norrie.

DRAINAGE AREA.--18.7 mi^2 (48.4 km^2).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,945 ft (3,031 m), from topographic map. Prior to May 15, 1967, at site 200 ft (61 m) downstream at different datum. May 16 to Aug. 24, 1967, at site 1,060 ft (320 m) downstream at datum 9,895.01 ft (3,015.999 m) Aug. 25, 1967, to Sept. 30, 1973, at site 1,100 ft (340 m) downstream at datum 9,892.49 ft (3,015.231 m) (U.S. Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversion above station through Charles H. Boustead tunnel since May 16, 1972 (see station 09077150 for figures of diversion). Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey

AVERAGE DISCHARGE.--8 years (water years 1964-71), 34.2 ft^3/s (0.969 m^3/s), 24,780 acre-ft/yr (30.6 hm^3/yr), prior to diversion through Charles H. Boustead tunnel; 7 years (water years 1972-78), 10.5 ft^3/s (0.297 m^3/s), 7,610 acre-ft/yr (9.38 hm^3/yr), subsequent to diversion through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 391 ft^3/s (11.1 m^3/s) June 22, 1965, gage height, 3.02 ft (0.920 m), site and datum then in use, from rating curve extended above 230 ft^3/s (6.5 m^3/s); maximum gage height, 4.62 ft (1.408 m) June 19, 1971; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft^3/s (0.99 m^3/s) at 2200 May 14, gage height, 1.44 ft (0.439 m); minimum daily, 3.0 ft^3/s (0.085 m^3/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	5.0	4.0	4.5	4.0	4.0	9.0	9.4	14	13	16	16
2	10	6.0	5.0	4.0	4.0	4.0	7.0	9.0	14	13	14	16
3	9.7	7.0	5.5	4.0	4.0	4.0	7.0	9.0	14	13	14	15
4	9.4	6.5	5.5	5.0	4.5	4.0	7.0	9.0	13	13	16	15
5	11	6.5	5.0	4.5	4.0	4.0	7.0	8.4	13	13	16	14
6	11	6.5	5.0	4.5	4.0	4.5	6.0	8.1	13	13	20	14
7	14	7.0	6.0	4.5	4.0	4.5	7.0	8.1	13	13	22	14
8	12	6.5	5.0	4.5	4.0	4.0	9.5	7.8	13	13	23	13
9	12	3.0	4.5	4.5	4.0	4.0	10	8.1	14	13	23	13
10	11	5.0	5.0	4.5	4.0	4.0	8.0	9.0	14	13	23	14
11	9.0	6.0	4.0	4.5	4.0	4.5	7.0	10	14	13	23	14
12	8.0	6.5	4.5	4.5	4.0	4.0	8.0	10	14	13	23	13
13	10	6.0	4.5	4.5	4.0	4.0	7.5	12	14	12	23	13
14	10	5.5	4.5	4.5	4.0	4.0	7.0	23	14	12	22	13
15	10	5.5	4.5	5.0	4.0	4.0	7.5	20	14	12	19	12
16	10	5.5	5.0	4.5	3.5	4.0	8.0	14	14	12	18	12
17	9.4	5.5	4.5	4.5	3.5	4.0	8.0	14	14	12	20	13
18	7.8	5.5	5.0	4.5	4.0	4.5	7.0	14	13	12	23	13
19	7.4	5.5	5.0	4.0	4.0	5.0	6.8	14	13	12	22	14
20	7.4	4.5	5.0	4.5	4.0	5.0	7.1	14	13	11	21	13
21	7.4	5.5	5.0	4.0	4.0	5.0	7.4	14	13	12	20	12
22	7.1	7.0	5.0	4.0	3.5	5.5	7.1	14	14	13	20	12
23	6.8	6.5	4.5	4.0	3.5	5.5	6.8	14	14	14	20	12
24	6.5	5.5	5.0	4.0	3.5	5.0	7.4	14	13	14	20	12
25	6.5	6.0	5.0	4.0	3.5	5.0	8.4	14	13	15	20	12
26	6.5	5.5	5.0	4.0	3.5	5.5	10	13	12	15	19	11
27	6.2	5.0	4.5	4.0	3.5	6.0	13	13	13	15	18	11
28	5.9	5.5	4.5	4.0	3.5	6.5	11	13	13	17	18	10
29	5.9	5.0	4.5	4.0	---	7.0	10	13	13	18	17	10
30	6.2	5.0	4.5	4.0	---	7.5	10	14	13	18	17	10
31	5.3	---	5.0	4.0	---	8.5	---	14	---	18	16	---
TOTAL	269.4	171.5	149.5	133.5	108.0	151.0	242.5	380.9	403	420	608	386
MEAN	8.69	5.72	4.82	4.31	3.86	4.87	8.08	12.3	13.4	13.5	19.6	12.9
MAX	14	7.0	6.0	5.0	4.5	8.5	13	23	14	18	23	16
MIN	5.3	3.0	4.0	4.0	3.5	4.0	6.0	7.8	12	11	14	10
AC-FT	534	340	297	265	214	300	481	756	799	833	1210	766

CAL YR 1977 TOTAL 4093.5 MEAN 11.2 MAX 70 MIN 1.5 AC-FT 8120
WTR YR 1978 TOTAL 3423.3 MEAN 9.38 MAX 23 MIN 3.0 AC-FT 6790

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO APR. 19.

09077250 LILY PAD CREEK FEEDER CANAL NEAR NORRIE, CO

LOCATION.--Lat 39°15'32", long 106°32'15", Pitkin County, Hydrologic Unit 14010004, on left bank at concrete diversion structure, 200 ft (61 m) downstream from diversion point on Lily Pad Creek, and 7.7 mi (12.4 km) southwest of Norrie.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 10,200.50 ft (3,109.112 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. This a transmountain diversion from Lily Pad Creek in Roaring Fork River basin through Charles H. Boustead tunnel to Arkansas River basin. Water is for municipal and irrigation use in the Southeastern Water Conservancy District. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 32 ft³/s (0.91 m³/s) June 15, 1978; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	1.0	9.5	8.7	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	11	7.7	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	13	7.2	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	13	6.4	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	10	5.4	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	11	4.7	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	13	4.2	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	12	4.1	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	13	5.0	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	19	5.5	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	24	5.2	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	27	4.4	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	29	3.3	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	31	2.9	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	1.1	32	2.9	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	2.7	31	3.2	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	3.2	26	4.1	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	2.5	22	2.3	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	2.7	24	2.2	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	3.4	24	2.1	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	3.8	25	1.5	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	3.6	27	1.2	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	4.2	25	1.1	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	5.5	22	.87	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	5.9	19	.78	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	6.1	14	.78	.00	.00
27	.00	.00	.00	.00	.00	.00	.90	6.1	11	.61	.00	.00
28	.00	.00	.00	.00	.00	.00	1.8	5.7	10	.26	.00	.00
29	.00	.00	.00	.00	---	.00	1.8	5.9	7.9	.00	.00	.00
30	.00	.00	.00	.00	---	.00	1.7	6.8	10	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	8.5	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	6.20	78.70	565.4	98.60	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.21	2.54	18.8	3.18	.000	.000
MAX	.00	.00	.00	.00	.00	.00	1.8	8.5	32	8.7	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	7.9	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	12	156	1120	196	.00	.00

CAL YR 1977 TOTAL 157.60 MEAN .43 MAX 13 MIN .00 AC-FT 313
WTR YR 1978 TOTAL 748.90 MEAN 2.05 MAX 32 MIN .00 AC-FT 1490

09077605 IVANHOE CREEK FEEDER CANAL NEAR NAST, CO

LOCATION.--Lat 39°17'14", long 106°33'31", unsurveyed, Pitkin County, Hydrologic Unit 14010004, on left bank about 300 ft (91 m) downstream from diversion point on Ivanhoe Creek, 2.3 mi (3.7 km) east of Nast, and 5.8 mi (9.3 km) southeast of Norrie.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage, 10,004.00 ft (3,049.219 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by diversion gates to Arkansas River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 94 ft³/s (2.66 m³/s) June 14, 1978; no flow most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	63	23	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	66	18	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	69	16	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	62	13	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	47	12	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	54	9.5	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	53	8.9	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	46	7.9	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	64	8.2	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	91	9.5	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	91	8.2	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	65	7.9	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	87	5.1	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	94	3.7	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	9.7	88	3.7	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	22	76	4.1	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	34	67	6.5	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	27	56	3.7	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	20	58	2.6	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	25	55	2.2	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	30	56	1.9	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	26	57	1.9	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	30	65	1.9	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	48	82	1.9	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	55	75	1.9	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	52	65	.87	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	49	59	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	34	58	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	32	57	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	49	40	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	58	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	600.70	1986	184.07	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	19.4	66.2	5.94	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	58	94	23	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	40	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	1190	3940	365	.00	.00

CAL YR 1977 TOTAL 605.00 MEAN 1.66 MAX 43 MIN .00 AC-FT 1200
WTR YR 1978 TOTAL 2770.77 MEAN 7.59 MAX 94 MIN .00 AC-FT 5500

09077610 IVANHOE CREEK NEAR NAST, CO

LOCATION.--Lat 39°17'13", long 106°33'31", unsurveyed, Pitkin County, Hydrologic Unit 14010004, on left bank 60 ft (18 m) upstream from culvert under Nast Tunnel, about 300 ft (91 m) downstream from diversion dam, 2.3 mi (3.7 km) east of Nast, and 5.8 mi (9.3 km) southeast of Norrie.

DRAINAGE AREA.--9.43 mi² (24.42 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,980 ft (3,042 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station through Busk-Ivanhoe and Charles S. Bousted tunnels to Arkansas River basin (see elsewhere in this report). Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55 ft³/s (1.56 m³/s) May 23, 1977, gage height, 2.13 ft (0.649 m); minimum daily, 0.25 ft³/s (0.007 m³/s) Feb. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23 ft³/s (0.65 m³/s) at 1700 May 14, gage height, 1.47 ft (0.448 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.85	.50	.50	.40	.35	2.3	2.9	3.0	2.4	2.2	.62
2	.86	.70	.60	.45	.40	.40	1.7	3.6	3.0	2.4	2.0	.56
3	.80	.70	.70	.45	.40	.40	1.6	3.6	3.1	2.5	1.7	.56
4	.74	.90	.70	.55	.45	.40	1.6	3.3	2.7	2.4	1.6	.50
5	1.0	.90	.60	.50	.40	.40	1.6	3.1	2.6	2.3	1.4	.43
6	1.3	.90	.60	.50	.40	.45	1.5	2.8	3.6	2.2	1.2	.43
7	2.0	.90	.70	.50	.40	.45	1.8	2.7	3.3	2.1	1.3	.46
8	1.7	.70	.60	.50	.40	.40	2.3	2.6	2.8	2.0	1.2	.46
9	1.6	.30	.55	.50	.40	.40	2.4	2.7	3.9	2.0	1.1	.43
10	1.5	.50	.60	.50	.40	.40	2.0	3.8	4.2	2.0	1.0	.43
11	1.1	.60	.50	.50	.40	.45	1.9	5.5	3.6	2.4	1.0	.56
12	1.0	.70	.55	.50	.40	.40	2.2	4.6	4.6	2.4	1.3	.50
13	1.4	.60	.55	.50	.40	.40	2.1	6.4	4.7	2.5	1.4	.43
14	1.6	.55	.55	.50	.40	.40	2.0	14	3.8	3.1	1.5	.43
15	1.7	.60	.55	.55	.40	.40	2.2	7.4	4.9	3.1	2.0	.43
16	1.7	.60	.60	.50	.35	.40	2.3	2.4	5.2	3.1	1.4	.43
17	1.5	.60	.55	.50	.35	.40	2.3	2.0	4.0	3.1	1.0	.43
18	1.4	.60	.60	.50	.40	.45	1.9	1.7	3.3	3.0	.98	.50
19	1.4	.60	.60	.45	.40	.50	1.8	2.0	3.4	3.1	.96	.55
20	1.4	.50	.60	.40	.40	.55	2.2	2.5	3.3	3.1	.92	.62
21	1.5	.60	.60	.45	.40	.60	2.1	2.6	3.2	3.0	.86	.56
22	1.4	.70	.60	.40	.35	.70	2.0	2.5	3.2	3.0	.86	.50
23	1.3	.65	.55	.40	.35	.70	1.9	2.8	3.0	3.0	.86	.46
24	1.2	.60	.60	.40	.35	.65	2.0	3.1	3.0	2.8	.80	.43
25	1.0	.65	.60	.40	.35	.60	2.7	2.5	2.7	2.8	.80	.40
26	1.0	.60	.60	.40	.35	.70	2.8	2.2	2.4	2.8	.86	.40
27	.98	.55	.55	.40	.35	.80	2.4	2.0	2.1	2.7	.74	.43
28	.98	.60	.55	.40	.35	.90	2.0	2.7	2.1	2.4	.58	.43
29	.92	.55	.55	.40	---	1.0	1.7	2.6	2.6	2.4	.62	.43
30	1.1	.55	.55	.40	---	1.3	1.5	3.2	2.4	2.2	.52	.43
31	.86	---	.60	.40	---	2.0	---	3.0	---	2.0	.56	---
TOTAL	38.68	19.35	18.15	14.30	10.80	18.35	60.8	108.8	99.7	80.4	35.44	14.24
MEAN	1.25	.65	.59	.46	.39	.59	2.03	3.51	3.32	2.59	1.14	.47
MAX	2.0	.90	.70	.55	.45	2.0	2.8	14	5.2	3.1	2.2	.62
MIN	.74	.30	.50	.40	.35	.35	1.5	1.7	2.1	2.0	.56	.40
AC-FT	77	38	36	28	21	36	121	216	198	159	70	28

CAL YR 1977 TOTAL 595.78 MEAN 1.63 MAX 30 MIN .25 AC-FT 1180
WTR YR 1978 TOTAL 519.01 MEAN 1.42 MAX 14 MIN .30 AC-FT 1030

NOTE.--NO GAGE-HEIGHT RECORD NOV. 8 TO APR. 21.

09077750 SOUTH FORK FRYINGPAN RIVER FEEDER CANAL NEAR NORRIE, CO

LOCATION.--Lat 39°14'20", long 106°35'22", Pitkin County, Hydrologic Unit 14010004, on right bank 110 ft (34 m) downstream from diversion point on South Fork Fryingpan River and 7.2 mi (11.6 km) southeast of Norrie.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 9,997.80 ft (3,047.329 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. This is a transmountain diversion from South Fork Fryingpan River in Roaring Fork River basin through Charles H. Boustead tunnel to Arkansas River basin. Water is for municipal and irrigation use in the Southeastern Colorado Water Conservancy District. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 188 ft³/s (5.32 m³/s) June 25, 1978; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	50	126	16	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	59	118	19	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	66	113	15	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	65	103	12	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	52	91	6.7	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	52	85	2.4	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	63	80	1.2	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	61	83	.81	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	85	85	.43	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	127	90	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	135	84	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	134	80	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	147	73	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	160	67	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	175	68	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	168	65	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	15	150	82	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	23	140	63	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	16	147	56	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	16	151	51	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	20	155	47	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	16	168	40	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	21	172	36	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	36	179	30	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	40	188	25	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	40	159	23	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	39	141	21	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	26	138	17	.00	.00
29	.00	.00	.00	.00	---	.00	.00	22	138	12	.00	.00
30	.00	.00	.00	.00	---	.00	.00	34	142	10	.00	.00
31	.00	---	.00	.00	---	.00	---	46	---	8.0	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	410.00	3767	1932.0	73.54	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	13.2	126	62.3	2.37	.000
MAX	.00	.00	.00	.00	.00	.00	.00	46	188	126	19	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	50	8.0	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	813	7470	3830	146	.00

CAL YR 1977 TOTAL 1484.29 MEAN 4.07 MAX 124 MIN .00 AC-FT 2940
WTR YR 1978 TOTAL 6182.54 MEAN 16.9 MAX 188 MIN .00 AC-FT 12260

09077800 SOUTH FORK FRYINGPAN RIVER AT UPPER STATION, NEAR NORRIE, CO

LOCATION.--Lat 39°14'20", long 106°35'24", Pitkin County, Hydrologic Unit 14010004, on right bank 300 ft (91 m) downstream from diversion dam, 5.2 mi (8.4 km) upstream from mouth, and 7.2 mi (11.6 km) southeast of Norrie.

DRAINAGE AREA.--11.5 mi² (29.8 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,990 ft (3,045 m), from topographic map. Prior to Oct. 1, 1973, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Transmountain diversion above station through Charles H. Boustead tunnel since May 16, 1972 (see station 09077750 for figures of diversion). Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--8 years (water years 1964-71), 21.6 ft³/s (0.612 m³/s), 15,650 acre-ft/yr (19.3 hm³/yr), prior to diversion through Charles H. Boustead tunnel; 7 years (water years 1972-78), 6.41 ft³/s (0.182 m³/s), 4,640 acre-ft/yr (5.72 hm³/yr), subsequent to diversion through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 326 ft³/s (9.23 m³/s) June 24, 1971, gage height, 3.35 ft (1.021 m), site and datum then in use, from rating curve extended above 180 ft³/s (5.1 m³/s); maximum gage height, 3.56 ft (1.085 m) May 12, 1973 (backwater from ice); minimum daily discharge, 0.5 ft³/s (0.014 m³/s) Dec. 22, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s (0.85 m³/s) at 1000 Aug. 9, gage height, 2.43 ft (0.741 m); minimum daily, 2.0 ft³/s (0.057 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	3.0	2.5	3.5	3.0	2.5	6.5	7.0	10	8.3	15	8.9
2	5.6	4.0	3.5	3.0	3.0	3.0	5.5	6.5	10	8.3	8.3	8.9
3	5.2	4.5	4.0	3.0	3.0	3.0	5.0	6.5	10	8.3	7.6	8.9
4	4.9	4.5	4.0	4.0	3.5	3.0	5.0	6.5	10	7.9	9.2	8.9
5	5.6	4.7	3.5	3.5	3.0	3.0	5.0	6.0	9.9	7.6	12	8.6
6	6.4	4.4	3.5	3.5	3.0	3.5	4.0	5.5	9.9	7.6	17	8.3
7	8.6	4.4	4.5	3.5	3.0	3.5	5.0	5.5	9.6	7.6	18	8.9
8	7.0	4.4	4.0	3.5	3.0	3.0	7.0	5.5	9.6	7.6	18	8.9
9	6.4	2.0	3.5	3.5	3.0	3.0	7.5	6.0	10	7.9	20	8.3
10	6.4	3.0	4.0	3.5	3.0	3.0	5.5	6.5	11	7.9	20	8.6
11	5.9	4.0	3.0	3.5	3.0	3.5	4.5	7.5	11	7.9	19	8.9
12	4.5	4.0	3.5	3.5	3.0	3.0	5.5	7.5	11	7.6	19	7.9
13	5.5	3.5	3.5	3.5	3.0	3.0	5.0	9.0	12	7.6	20	7.3
14	5.9	3.5	3.5	3.5	3.0	3.0	4.5	12	12	7.6	20	7.3
15	5.6	3.5	3.5	4.0	3.0	3.0	5.0	20	12	7.6	22	7.0
16	5.4	3.5	4.0	3.5	2.5	3.0	5.5	25	9.9	7.6	17	6.7
17	5.2	3.5	3.5	3.5	2.5	3.0	5.5	15	8.3	7.3	15	6.7
18	5.2	3.5	4.0	3.5	3.0	3.0	5.0	9.2	7.3	7.0	14	6.7
19	4.9	3.5	4.0	3.0	3.0	3.5	4.5	8.9	8.3	7.0	13	8.3
20	4.7	3.0	4.0	3.5	3.0	3.5	5.0	9.2	9.2	6.7	12	8.6
21	4.7	4.0	4.0	3.0	3.0	3.5	5.0	9.2	9.2	6.7	12	8.3
22	4.4	5.0	4.0	3.0	2.5	4.0	5.0	9.2	9.6	6.7	12	7.0
23	4.4	4.5	3.5	3.0	2.5	4.0	4.5	9.2	9.2	6.7	12	6.7
24	4.0	4.0	4.0	3.0	2.5	3.5	5.0	9.6	8.6	9.6	12	6.4
25	3.8	4.5	4.0	3.0	2.5	3.5	6.0	9.9	7.0	13	12	6.2
26	3.6	4.0	4.0	3.0	2.5	4.0	7.5	9.9	7.3	13	12	5.9
27	3.6	3.5	3.5	3.0	2.5	4.0	9.0	9.9	8.9	14	11	5.9
28	3.6	4.0	3.5	3.0	2.5	4.5	8.0	9.6	9.6	18	11	5.9
29	3.6	3.5	3.5	3.0	---	5.0	7.5	9.6	9.6	21	10	5.9
30	3.6	3.5	3.5	3.0	---	5.5	7.5	9.9	8.9	21	10	5.9
31	3.4	---	4.0	3.0	---	6.0	---	10	---	21	9.2	---
TOTAL	157.0	114.9	115.0	102.5	80.0	109.5	171.0	290.8	288.9	303.6	439.3	226.7
MEAN	5.06	3.83	3.71	3.31	2.86	3.53	5.70	9.38	9.63	9.79	14.2	7.56
MAX	8.6	5.0	4.5	4.0	3.5	6.0	9.0	25	12	21	22	8.9
MIN	3.4	2.0	2.5	3.0	2.5	2.5	4.0	5.5	7.0	6.7	7.6	5.9
AC-FT	311	228	228	203	159	217	339	577	573	602	871	450

CAL YR 1977 TOTAL 2367.30 MEAN 6.49 MAX 37 MIN .80 AC-FT 4700
WTR YR 1978 TOTAL 2399.20 MEAN 6.57 MAX 25 MIN 2.0 AC-FT 4760

NOTE.--NO GAGE-HEIGHT RECORD NOV. 9 TO MAY 17.

09077940 CHAPMAN GULCH FEEDER CANAL NEAR NORRIE, CO

LOCATION.--Lat 39°14'47", long 106°37'45", Pitkin County, Hydrologic Unit 14010004, on right bank 180 ft (55 m) downstream from diversion point on Chapman Gulch and 4.9 mi (7.9 km) south of Norrie.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 10,032.60 ft (3,057.936 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. This is a transmountain diversion from Chapman Gulch and Sawyer Creek Feeder Canal in Roaring Fork River basin through Charles H. Boustead tunnel to Arkansas River basin. Water is for municipal and irrigation use in the Southeastern Colorado Conservancy District. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 144 ft³/s (4.08 m³/s) June 24, 1978; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	46	97	9.9	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	50	92	14	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	58	90	13	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	58	82	10	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	46	74	5.7	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	51	68	2.3	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	59	62	1.5	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	54	62	.56	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	75	70	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	108	70	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	113	64	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	114	59	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	127	53	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	135	48	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	143	48	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	134	47	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	4.6	123	64	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	11	115	46	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	12	123	39	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	15	128	35	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	17	129	32	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	16	140	28	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	21	143	25	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	31	144	16	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	35	141	10	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	35	125	9.4	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	36	113	8.1	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	26	108	7.7	.00	.00
29	.00	.00	.00	.00	---	.00	.00	24	107	7.0	.00	.00
30	.00	.00	.00	.00	---	.00	.00	33	113	5.9	.00	.00
31	.00	---	.00	.00	---	.00	---	40	---	4.5	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	356.60	3123	1423.6	56.96	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	11.5	104	45.9	1.84	.000
MAX	.00	.00	.00	.00	.00	.00	.00	40	144	97	14	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	46	4.5	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	707	6190	2820	113	.00

CAL YR 1977 TOTAL 1054.26 MEAN 2.89 MAX 78 MIN .00 AC-FT 2090
WTR YR 1978 TOTAL 4960.16 MEAN 13.6 MAX 144 MIN .00 AC-FT 9840

09077945 CHAPMAN GULCH NEAR NAST, CO

LOCATION.--Lat 39°15'51", long 106°37'54", Pitkin County, Hydrologic Unit 14010004, on left bank 700 ft (210 m) downstream from Chapman diversion tunnel, 2.5 mi (4.0 km) northwest of Nast, 3.3 mi (5.3 km) upstream from mouth, and 4.3 mi (6.9 km) south of Norrie.

DRAINAGE AREA.--5.99 mi² (15.51 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude is 9,850 ft (3,002 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Transmountain diversion above station to Charles H. Boustead tunnel by Chapman Gulch feeder canal (station 09077940). Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--6 years, 3.26 ft³/s (0.092 m³/s), 2,360 acre-ft/yr (2.91 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53 ft³/s (1.50 m³/s) July 24, 1977, gage height, 3.36 ft (1.024 m); minimum daily, 0.20 ft³/s (0.006 m³/s) Dec. 22, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22 ft³/s (0.623 m³/s) May 17, gage height, 2.61 ft (0.796 m); minimum daily, 0.50 ft³/s (0.014 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	1.2	.80	.80	.70	.65	1.1	1.4	5.5	3.6	6.9	4.3
2	2.9	1.0	.90	.75	.70	.70	.95	1.5	5.4	3.7	4.8	4.2
3	2.8	1.0	1.0	.75	.70	.70	.95	1.6	5.4	4.2	4.7	4.2
4	2.6	1.2	1.0	.85	.75	.70	.95	1.5	5.2	4.3	5.4	4.0
5	2.8	1.2	.90	.80	.70	.70	.95	1.4	5.0	4.2	9.0	3.8
6	3.0	1.2	.90	.80	.70	.75	.90	1.3	5.2	4.0	11	3.7
7	3.0	1.2	1.0	.80	.70	.75	1.0	1.2	5.0	3.8	11	4.7
8	2.0	1.0	.90	.80	.70	.70	1.2	1.1	4.8	4.2	11	4.3
9	2.5	.50	.85	.80	.70	.70	1.2	1.1	4.3	4.2	12	3.7
10	3.0	.80	.90	.80	.70	.70	1.0	1.5	4.7	4.3	13	4.5
11	3.0	.90	.80	.80	.70	.75	.95	2.0	5.7	4.2	12	4.7
12	4.0	1.0	.85	.80	.70	.70	1.0	2.0	5.5	4.2	10	3.8
13	3.5	.90	.85	.80	.70	.70	1.0	5.0	5.5	4.2	11	3.6
14	3.5	.85	.85	.80	.70	.70	1.0	10	5.9	4.0	11	3.3
15	3.0	.90	.85	.85	.70	.70	1.0	15	5.7	4.0	12	3.2
16	2.5	.90	.90	.80	.65	.70	1.1	19	4.8	4.2	9.2	3.1
17	2.0	.90	.85	.80	.65	.70	1.1	16	5.0	4.2	8.3	3.7
18	2.0	.90	.90	.80	.70	.70	.90	9.2	4.8	4.0	7.8	3.8
19	1.8	.90	.90	.75	.70	.75	.95	7.6	4.8	4.0	7.2	4.3
20	1.7	.80	.90	.70	.70	.75	1.0	7.6	4.8	4.0	6.8	4.2
21	1.9	.90	.90	.75	.70	.80	1.0	7.6	4.7	4.0	6.8	3.8
22	1.8	1.0	.90	.70	.65	.80	1.0	7.6	4.2	4.0	7.0	3.7
23	1.7	.95	.85	.70	.65	.80	.95	7.6	4.2	4.0	6.8	3.4
24	1.6	.90	.90	.70	.65	.75	.95	7.6	4.7	8.5	6.3	3.2
25	1.6	.95	.90	.70	.65	.75	1.3	7.4	4.5	12	6.3	3.2
26	1.4	.90	.90	.70	.65	.75	1.6	7.4	4.3	12	6.1	3.0
27	1.4	.85	.85	.70	.65	.80	2.0	7.2	4.8	13	5.5	2.9
28	1.3	.90	.85	.70	.65	.85	1.6	7.2	5.2	14	5.0	2.8
29	1.3	.85	.85	.70	---	.90	1.5	7.2	5.2	14	4.8	2.8
30	1.3	.85	.85	.70	---	.95	1.5	7.2	4.3	14	4.5	2.6
31	1.2	---	.90	.70	---	1.0	---	6.3	---	14	4.5	---
TOTAL	71.0	28.30	27.45	23.60	19.20	23.35	33.60	187.3	149.1	195.0	249.7	110.5
MEAN	2.29	.94	.89	.76	.69	.75	1.12	6.04	4.97	6.29	8.05	3.68
MAX	4.0	1.2	1.0	.85	.75	1.0	2.0	19	5.9	14	13	4.7
MIN	1.2	.50	.80	.70	.65	.65	.90	1.1	4.2	3.6	4.5	2.6
AC-FT	141	56	54	47	38	46	67	372	296	387	495	219

CAL YR 1977 TOTAL 1177.20 MEAN 3.23 MAX 23 MIN .30 AC-FT 2330
WTR YR 1978 TOTAL 1118.10 MEAN 3.06 MAX 19 MIN .50 AC-FT 2220

NOTE.--NO GAGE HEIGHT RECORD NOV. 20 TO MAY 16.

09077960 SAWYER CREEK FEEDER CANAL NEAR NORRIE, CO

LOCATION.--Lat 39°15'44", long 106°37'39", Pitkin County, Hydrologic Unit 14010004, on left bank 3,100 ft (940 m) downstream from diversion point on Sawyer Creek and 4.9 mi (7.9 km) south of Norrie.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 10,047.00 ft (3,062.326 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. This is a transmountain diversion from Sawyer Creek in Roaring Fork River basin through Charles H. Boustead tunnel to Arkansas River basin. Water is diverted to Chapman Gulch and is rediverted by Chapman Gulch feeder canal. Water is for municipal and irrigation use in the Southeastern Colorado Water Conservancy District. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 37 ft³/s (1.05 m³/s) June 24, 25, 1978; no flow for most of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	9.7	27	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	12	26	1.7	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	14	25	3.0	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	14	23	2.7	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	13	20	2.4	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	13	18	1.0	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	14	17	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	14	16	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	20	17	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	27	18	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	30	16	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	32	16	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	34	14	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	35	13	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	36	12	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	33	12	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	35	16	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	1.2	32	12	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	2.0	34	10	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	2.5	34	8.8	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	2.9	35	7.9	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	3.1	36	7.1	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	4.3	36	6.3	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	5.6	37	2.7	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	6.1	37	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	7.0	34	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	7.1	31	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	6.2	30	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	6.2	30	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	7.3	30	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	8.5	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	70.00	821.7	360.80	10.80	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	2.26	27.4	11.6	.35	.000
MAX	.00	.00	.00	.00	.00	.00	.00	8.5	37	27	3.0	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	9.7	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	139	1630	716	21	.00

CAL YR 1977 TOTAL 274.49 MEAN .75 MAX 22 MIN .00 AC-FT 544
WTR YR 1978 TOTAL 1263.30 MEAN 3.46 MAX 37 MIN .00 AC-FT 2510

09078000 FRYINGPAN RIVER AT NORRIE, CO

LOCATION.--Lat 39°19'51", long 106°39'27", in NE¼NE¼ sec.28, T.8 S., R.83 W., Pitkin County, Hydrologic Unit 14010004, on right bank 200 ft (61 m) west of county road at Norrie, 1.2 mi (1.9 km) upstream from North Fork, and 2.1 mi (3.4 km) downstream from Chapman Gulch.

DRAINAGE AREA.--90.6 mi² (234.7 km²).

PERIOD OF RECORD.--October 1910 to March 1917, October 1947 to current year. Prior to October 1960, published as Fryingpan Creek at Norrie.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,410 ft (2,563 m), from topographic map. February 1911 to March 1917, nonrecording gages at site 200 ft (61 m) upstream at different datums.

REMARKS.--Records good except those for winter period, which are fair. Transmountain diversions above station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years (water years 1911-16, 1947-71), 123 ft³/s (3.483 m³/s) 89,110 acre-ft/yr (110 hm³/yr), prior to diversion through Charles H. Boustead tunnel; 7 years (water years 1972-78), 57.8 ft³/s (1.637 m³/s), 41,880 acre-ft/yr (51.6 hm³/yr), subsequent to diversion through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s (50.4 m³/s) June 30, 1957, gage height, 5.37 ft (1.637 m); maximum gage height, 5.55 ft (1.692 m) June 28, 1957; minimum daily discharge, 8.0 ft³/s (0.23 m³/s) Dec. 26, 1952, but may have been less during periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 368 ft³/s (10.4 m³/s) at 2330 June 15, gage height, 3.28 ft (1.000 m); minimum daily, 10 ft³/s (0.28 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	22	19	16	16	15	52	74	190	150	68	35
2	29	24	20	11	16	16	41	76	193	135	53	34
3	28	25	22	14	13	17	41	83	204	130	44	34
4	28	25	22	17	15	18	39	81	210	122	44	34
5	29	24	20	18	17	17	40	72	200	111	48	34
6	34	25	18	18	15	18	37	63	180	103	56	30
7	56	26	19	18	17	17	44	58	170	96	59	29
8	46	23	22	15	16	16	60	53	190	94	59	32
9	37	22	18	16	16	16	65	55	210	94	62	30
10	36	22	20	19	16	17	48	70	260	101	60	33
11	30	22	19	19	16	18	45	85	282	92	63	36
12	28	22	19	18	16	19	55	83	270	87	50	32
13	30	22	17	17	15	18	51	96	282	79	65	29
14	30	22	19	17	15	18	50	153	294	74	68	28
15	31	22	20	16	14	17	53	221	314	72	74	29
16	30	22	19	18	14	16	56	252	314	74	58	27
17	29	21	14	17	13	16	58	235	270	92	52	29
18	29	22	18	17	10	16	48	150	224	68	55	30
19	28	22	20	15	11	18	46	144	221	59	52	32
20	27	22	17	14	14	20	50	153	238	59	50	34
21	29	20	13	17	14	22	55	179	235	58	48	31
22	29	22	16	17	14	24	50	179	242	53	48	31
23	27	22	17	16	13	22	45	190	238	52	51	29
24	26	21	19	16	13	21	50	218	228	52	47	27
25	25	21	19	15	14	20	66	207	224	65	46	28
26	25	21	19	15	15	20	92	193	193	62	46	26
27	24	21	16	16	15	24	108	200	172	62	42	26
28	24	20	18	14	15	27	83	172	165	68	37	25
29	24	20	20	13	---	29	74	162	165	79	36	25
30	26	20	19	16	---	36	77	179	162	76	36	24
31	24	---	19	16	---	45	---	190	---	72	35	---
TOTAL	928	665	577	501	408	633	1679	4326	6740	2591	1622	903
MEAN	29.9	22.2	18.6	16.2	14.6	20.4	56.0	140	225	83.6	52.3	30.1
MAX	56	26	22	19	17	45	108	252	314	150	74	36
MIN	24	20	13	11	10	15	37	53	162	52	35	24
AC-FT	1840	1320	1140	994	609	1260	3330	8580	13370	5140	3220	1790

CAL YR 1977 TOTAL 13741.6 MEAN 37.6 MAX 165 MIN 9.6 AC-FT 27260
WTR YR 1978 TOTAL 21573.0 MEAN 59.1 MAX 314 MIN 10 AC-FT 42790

09078100 NORTH FORK FRYINGPAN RIVER ABOVE CUNNINGHAM CREEK, NEAR NORRIE, CO

LOCATION.--Lat 39°21'32", long 106°34'04", Pitkin County, Hydrologic Unit 14010004, on left bank 1.7 mi (2.7 km) upstream from Cunningham Creek and 5.5 mi (8.8 km) east of Norrie.

DRAINAGE AREA.--12.0 mi² (31.1 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,420 ft (2,871 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 20.2 ft³/s (0.572 m³/s), 14,630 acre-ft/yr (18.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 381 ft³/s (10.8 m³/s) July 4, 1975, gage height, 4.07 ft (1.241 m); maximum gage height recorded, 4.24 ft (1.292 m) Apr. 22, 1965 (backwater from ice); minimum daily discharge, 0.40 ft³/s (0.011 m³/s) Feb. 17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 363 ft³/s (10.3 m³/s) at 2300 June 15, gage height, 4.03 ft (1.228 m), only peak above base of 150 ft³/s (4.2 m³/s); minimum daily, 0.98 ft³/s (0.028 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	2.9	2.5	1.9	1.9	1.8	8.0	7.4	75	154	20	4.9
2	4.2	2.9	2.7	1.7	1.7	1.8	7.6	7.2	84	134	19	4.7
3	4.2	2.8	2.7	2.0	1.8	1.9	7.0	8.2	99	125	17	4.2
4	3.8	2.8	2.6	2.1	1.9	2.0	6.6	8.2	99	114	16	4.2
5	4.2	2.8	2.6	2.1	2.0	2.0	7.0	7.2	74	98	14	4.0
6	5.3	2.8	2.6	2.1	2.0	2.1	6.8	6.9	74	90	13	3.8
7	10	3.0	2.6	2.1	2.0	2.2	7.2	7.2	101	84	13	3.8
8	9.2	2.8	2.6	2.1	2.0	2.3	8.0	7.2	94	85	13	4.0
9	8.5	2.6	2.5	2.1	1.9	2.4	7.6	7.2	136	86	12	3.7
10	7.2	2.6	2.5	2.1	1.9	2.5	7.4	8.2	212	93	12	3.7
11	5.5	2.8	2.5	2.0	1.9	2.4	7.8	11	224	90	11	4.0
12	5.5	2.8	2.5	2.0	1.8	2.4	8.0	10	210	91	11	3.7
13	5.5	2.7	2.4	2.0	1.7	2.3	7.8	13	235	80	13	3.2
14	4.9	2.7	2.3	2.0	1.6	2.3	7.6	27	252	67	16	3.0
15	4.9	2.7	2.3	2.0	1.5	2.3	7.4	44	262	66	13	2.6
16	4.9	2.7	2.3	2.0	1.3	2.2	7.8	63	250	68	9.9	2.4
17	4.7	2.7	2.0	2.0	.98	2.4	7.6	67	202	82	9.2	2.7
18	4.4	2.7	2.4	2.0	1.0	2.7	7.2	41	172	62	9.2	3.0
19	4.2	2.7	2.3	1.9	1.2	3.0	7.8	32	181	51	7.8	3.2
20	4.0	2.5	2.1	2.0	1.3	3.3	8.2	40	188	43	7.2	3.4
21	4.2	3.0	1.8	2.0	1.4	3.6	8.8	47	192	45	6.9	3.0
22	4.2	2.9	2.0	2.0	1.5	4.0	8.2	41	212	40	7.2	3.0
23	4.0	2.8	2.2	2.1	1.6	3.6	8.0	49	216	32	7.5	2.9
24	3.7	2.7	2.2	2.1	1.7	3.3	9.0	68	228	32	6.9	2.6
25	3.4	2.7	2.2	2.1	1.8	3.0	9.6	68	242	28	6.2	2.4
26	3.4	2.7	2.1	2.0	1.7	3.8	10	63	186	24	5.8	2.3
27	3.2	2.7	2.1	2.0	1.7	4.5	9.4	66	159	24	5.3	2.2
28	3.0	2.6	2.3	2.0	1.7	5.4	8.6	50	156	24	4.9	2.2
29	3.0	2.6	2.2	2.0	---	6.2	8.2	46	152	23	4.7	2.0
30	3.0	2.6	2.1	2.0	---	6.8	7.8	62	167	23	4.7	1.9
31	2.9	---	2.0	1.9	---	7.6	---	70	---	20	4.2	---
TOTAL	147.5	82.3	72.2	62.4	46.48	98.1	238.0	1052.9	5134	2080	320.6	96.7
MEAN	4.76	2.74	2.33	2.01	1.66	3.16	7.93	34.0	171	67.1	10.3	3.22
MAX	10	3.0	2.7	2.1	2.0	7.6	10	70	262	154	20	4.9
MIN	2.9	2.5	1.8	1.7	.98	1.8	6.6	6.9	74	20	4.2	1.9
AC-FT	293	163	143	124	92	195	472	2090	10180	4130	636	192

CAL YR 1977 TOTAL 4150.40 MEAN 11.4 MAX 125 MIN .40 AC-FT 8230
WTR YR 1978 TOTAL 9431.18 MEAN 25.8 MAX 262 MIN .98 AC-FT 18710

NOTE.--NO GAGE-HEIGHT RECORD NOV. 1 TO MAY 2.

09078200 CUNNINGHAM CREEK NEAR NORRIE, CO

LOCATION.--Lat 39°20'03", long 106°34'29", Pitkin County, Hydrologic Unit 14010004, on left bank 0.4 mi (0.6 km) upstream from unnamed tributary, 1.5 mi (2.4 km) upstream from mouth, and 4.5 mi (7.2 km) east of Norrie.

DRAINAGE AREA.--7.12 mi^2 (18.44 km^2).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,550 ft (2,911 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion or regulation above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 10.8 ft^3/s (0.306 m^3/s), 7,820 acre-ft/yr (9.64 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft^3/s (9.49 m^3/s) July 4, 1975, gage height, 2.89 ft (0.881 m), from rating curve extended above 160 ft^3/s (4.5 m^3/s); maximum gage height, 3.62 ft (1.103 m) July 5, 1975 (backwater from debris); minimum daily discharge, 0.10 ft^3/s (0.003 m^3/s) Feb. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206 ft^3/s (5.83 m^3/s) at 2130 June 15, gage height, 2.61 ft (0.796 m), only peak above base of 100 ft^3/s (2.8 m^3/s); minimum daily, 0.90 ft^3/s (0.025 m^3/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.3	1.2	1.1	1.0	1.2	2.8	5.6	53	80	4.6	1.4
2	1.9	1.3	1.2	1.1	.96	1.2	2.7	5.6	58	71	4.4	1.4
3	1.9	1.3	1.2	1.1	1.0	1.2	2.6	5.8	62	67	3.8	1.4
4	1.8	1.3	1.2	1.1	1.0	1.2	2.6	5.8	62	58	3.6	1.3
5	2.1	1.3	1.2	1.1	1.0	1.2	2.6	5.6	50	52	3.3	1.3
6	2.8	1.3	1.2	1.1	1.0	1.2	2.7	5.4	58	47	3.1	1.3
7	4.2	1.4	1.2	1.1	1.0	1.2	2.9	5.2	65	46	3.0	1.3
8	3.4	1.2	1.2	1.1	1.0	1.2	3.2	5.0	60	44	2.9	1.3
9	3.2	1.1	1.2	1.1	1.0	1.3	3.0	5.0	80	44	2.6	1.2
10	2.9	1.2	1.2	1.1	1.0	1.4	3.0	5.8	107	42	2.6	1.2
11	2.8	1.3	1.2	1.1	1.0	1.3	3.0	6.1	110	36	2.6	1.3
12	2.5	1.3	1.2	1.1	1.0	1.3	3.2	5.8	112	35	3.1	1.4
13	2.1	1.3	1.2	1.1	1.0	1.3	3.3	8.4	120	30	3.3	1.3
14	1.8	1.3	1.2	1.1	1.0	1.2	3.4	19	123	25	3.6	1.3
15	1.8	1.3	1.2	1.1	1.0	1.2	3.5	30	132	22	3.6	1.3
16	1.8	1.3	1.1	1.1	1.0	1.2	3.7	41	134	21	2.8	1.2
17	1.8	1.3	1.2	1.1	.90	1.3	3.5	41	112	33	2.3	1.3
18	1.7	1.3	1.2	1.1	.96	1.4	3.2	29	93	20	2.1	1.4
19	1.7	1.3	1.1	1.1	1.0	1.5	3.4	18	105	14	2.0	1.5
20	1.6	1.2	1.1	1.1	1.1	1.6	3.6	25	102	12	1.9	1.7
21	1.7	1.4	1.1	1.1	1.1	1.8	4.0	31	107	10	1.8	1.7
22	1.7	1.3	1.1	1.1	1.1	2.0	3.7	28	123	8.8	1.9	1.6
23	1.6	1.3	1.1	1.1	1.1	1.9	3.4	36	123	7.8	1.8	1.5
24	1.6	1.3	1.1	1.1	1.1	1.7	4.0	48	123	6.9	1.7	1.4
25	1.6	1.3	1.1	1.1	1.2	1.6	4.8	46	120	6.5	1.7	1.3
26	1.5	1.2	1.1	1.0	1.1	1.8	6.0	44	90	5.8	1.7	1.3
27	1.5	1.2	1.1	1.0	1.1	2.1	5.8	41	82	5.4	1.6	1.3
28	1.4	1.2	1.1	1.0	1.1	2.2	5.8	31	84	5.2	1.5	1.3
29	1.3	1.2	1.1	1.0	---	2.3	5.6	33	84	4.8	1.5	1.2
30	1.3	1.2	1.1	1.0	---	2.4	5.6	44	88	4.6	1.4	1.2
31	1.3	---	1.1	1.0	---	2.6	---	52	---	4.4	1.4	---
TOTAL	62.3	38.2	35.8	33.5	28.82	48.0	110.6	712.1	2822	869.2	79.2	40.6
MEAN	2.01	1.27	1.15	1.08	1.03	1.55	3.69	23.0	94.1	28.0	2.55	1.35
MAX	4.2	1.4	1.2	1.1	1.2	2.6	6.0	52	134	80	4.6	1.7
MIN	1.3	1.1	1.1	1.0	.90	1.2	2.6	5.0	50	4.4	1.4	1.2
AC-FT	124	76	71	66	57	95	219	1410	5600	1720	157	81

CAL YR 1977 TOTAL 1665.51 MEAN 4.56 MAX 57 MIN .10 AC-FT 3300
WTR YR 1978 TOTAL 4880.32 MEAN 13.4 MAX 134 MIN .90 AC-FT 9680

NOTE.--NO GAGE-HEIGHT RECORD OCT. 31 TO MAY 10.

09078500 NORTH FORK FRYINGPAN RIVER NEAR NORRIE, CO

LOCATION.--Lat 39°20'34", long 106°39'55", in SE¼NW¼ sec.21, T.8 S., R.83 W., Pitkin County, Hydrologic unit 14010004, on left bank 800 ft (240 m) upstream from bridge on county road, 0.4 mi (0.6 km) upstream from mouth, 0.5 mi (0.8 km) downstream from Last Chance Creek, and 1.3 mi (2.1 km) northwest of Norrie.

DRAINAGE AREA.--42.0 mi² (108.8 km²).

PERIOD OF RECORD.--October 1910 to March 1917, October 1947 to current year. Prior to October 1960, published as North Fork Fryingpan Creek near Norrie.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,330 ft (2,539 m), from topographic map. Feb. 18, 1911, to Mar. 31, 1917, nonrecording gage at site 10 ft (3 m) downstream at different datum. Oct. 1, 1947, to Sept. 30, 1949, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter period, which are poor. One small diversion bypasses station for domestic use and irrigation of pasture. Low flow slightly regulated since 1968 by small recreation reservoir 2.0 mi (3.2 km) upstream. Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--37 years (water years 1911-16, 1948-78), 51.0 ft³/s (1.444 m³/s), 36,950 acre-ft/yr (45.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) June 6, 1958, gage height, 4.98 ft (1.518 m), from rating curve extended above 700 ft³/s (20 m³/s); maximum gage height, 5.80 ft (1.768 m) May 21, 1943 (present datum); minimum daily discharge, 0.5 ft³/s (0.014 m³/s) Nov. 1, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 674 ft³/s (19.1 m³/s) at 0100 June 14, gage height, 4.95 ft (1.509 m), only peak above base of 420 ft³/s (12 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) Feb. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	5.7	3.5	4.0	3.5	3.0	36	50	222	338	47	8.7
2	8.7	8.0	4.5	3.5	3.5	3.5	29	48	247	300	46	7.9
3	8.3	8.1	5.0	3.5	3.5	3.5	28	51	265	280	39	7.1
4	7.9	7.9	5.0	4.5	4.0	3.5	27	50	290	247	35	6.9
5	8.5	7.7	4.5	4.0	3.5	3.5	27	44	218	208	31	6.1
6	11	7.7	4.5	4.0	3.5	4.0	26	39	222	190	29	5.9
7	24	7.9	5.5	4.0	3.5	4.0	26	35	290	175	28	5.9
8	19	7.3	4.5	4.0	3.5	3.5	39	32	270	175	28	5.9
9	16	2.5	4.0	4.0	3.5	3.5	43	32	343	183	25	5.7
10	15	4.0	4.5	4.0	3.5	3.5	31	42	511	183	24	6.1
11	10	5.0	3.5	4.0	3.5	4.0	27	55	518	178	23	6.7
12	10	5.5	4.0	4.0	3.5	3.5	33	56	497	170	24	6.1
13	11	4.5	4.0	4.0	3.5	3.5	32	66	525	151	26	5.4
14	10	4.0	4.0	4.0	3.5	3.5	30	112	539	129	33	4.9
15	10	4.5	4.0	4.5	3.5	3.5	33	177	546	128	32	4.6
16	9.8	4.5	4.5	4.0	3.0	3.5	34	235	518	133	23	4.2
17	9.3	4.5	4.0	4.0	3.0	3.5	35	231	470	154	19	4.6
18	8.9	4.5	4.5	4.0	3.5	4.0	29	135	444	126	18	5.5
19	8.5	4.5	4.5	4.0	3.5	4.5	27	109	444	101	17	6.5
20	8.3	3.5	4.5	3.5	3.5	5.0	30	126	458	87	15	7.3
21	9.1	4.5	4.5	4.0	3.5	5.5	36	159	444	86	14	6.3
22	9.1	6.0	4.5	3.5	3.0	7.0	35	147	484	79	15	6.1
23	8.5	5.5	4.0	3.5	3.0	7.0	30	161	484	68	16	5.5
24	7.9	5.0	4.5	3.5	3.0	6.5	34	218	470	62	14	4.9
25	7.5	5.5	4.5	3.5	3.0	6.0	47	214	497	60	13	4.6
26	7.3	5.0	4.5	3.5	3.0	7.0	58	190	419	54	13	4.4
27	7.1	4.5	4.0	3.5	3.0	9.0	67	194	377	52	12	4.0
28	6.7	5.0	4.0	3.5	3.0	12	54	154	360	51	9.3	3.7
29	6.5	4.5	4.0	3.5	---	18	49	142	354	50	8.7	3.6
30	7.5	4.5	4.0	3.5	---	26	51	180	371	50	8.3	3.6
31	7.1	---	4.5	3.5	---	33	---	208	---	45	7.9	---
TOTAL	307.6	161.8	134.0	118.5	94.0	211.0	1083	3692	12117	4293	693.2	168.7
MEAN	9.92	5.39	4.32	3.82	3.36	6.81	36.1	119	404	138	22.4	5.62
MAX	24	8.1	5.5	4.5	4.0	33	67	235	546	338	47	8.7
MIN	6.5	2.5	3.5	3.5	3.0	3.0	26	32	218	45	7.9	3.6
AC-FT	610	321	266	235	186	419	2150	7320	24030	8520	1370	335

CAL YR 1977 TOTAL 7980.28 MEAN 21.9 MAX 247 MIN .98 AC-FT 15830
WTR YR 1978 TOTAL 23073.80 MEAN 63.2 MAX 546 MIN 2.5 AC-FT 45770

NOTE.--NO GAGE-HEIGHT RECORD NOV. 9 TO APR. 5.

09078600 FRYINGPAN RIVER NEAR THOMASVILLE, CO

LOCATION.--Lat 39°20'41", long 106°40'23", in NW¼NW¼ sec.21, T.8 S., R.83 W., Pitkin County, Hydrologic unit 14010004, on right bank 400 ft (120 m) upstream from private bridge, 400 ft (120 m) downstream from North Fork, 1.6 mi (2.6 km) southeast of Thomasville, and 1.7 mi (2.7 km) northwest of Norrie.

DRAINAGE AREA.--134 mi² (347 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,210 ft (2,502 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversions above station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s (30.02 m³/s) June 16, 1978, gage height, 3.94 ft (1.201 m); minimum daily, 10 ft³/s (0.28 m³/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) at 0100 June 16, gage height, 3.94 ft (1.201 m); minimum daily, 15 ft³/s (0.42 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	22	20	21	20	19	101	125	430	480	120	48
2	34	25	23	20	20	20	80	130	448	430	104	47
3	33	28	25	20	20	20	78	139	487	406	82	47
4	32	27	25	22	21	20	77	139	494	360	80	45
5	34	27	23	21	20	20	77	122	423	324	82	45
6	42	27	23	21	20	21	70	108	430	294	86	41
7	74	28	26	21	20	21	82	97	501	280	88	40
8	58	26	23	21	20	20	115	90	480	275	96	43
9	48	15	22	21	20	20	120	91	571	284	88	42
10	47	21	23	21	20	20	90	115	750	289	86	44
11	36	25	21	21	20	21	82	144	813	275	88	48
12	35	26	22	21	20	20	97	147	789	261	88	44
13	36	23	22	21	20	20	93	172	829	240	95	38
14	36	22	22	21	20	20	88	284	870	215	106	37
15	36	23	22	22	20	20	95	442	904	212	110	37
16	36	23	23	21	19	20	101	515	888	219	82	36
17	35	23	22	21	19	20	101	487	773	261	74	37
18	34	23	23	21	20	21	86	313	698	208	75	40
19	33	23	23	20	20	23	80	270	712	179	72	41
20	32	20	23	21	20	24	86	308	720	160	59	43
21	35	23	23	20	20	25	95	371	705	153	66	40
22	34	28	23	20	18	26	90	350	735	144	66	41
23	31	26	22	20	18	28	82	383	742	130	59	38
24	30	24	23	20	19	27	88	461	728	125	64	35
25	27	25	23	20	19	26	120	448	735	133	64	35
26	28	24	23	20	19	28	153	411	613	125	64	32
27	26	23	22	20	19	33	186	423	550	122	57	31
28	26	24	22	20	19	42	144	350	529	125	53	30
29	26	23	22	20	---	50	130	324	515	136	50	29
30	28	23	22	20	---	64	130	383	543	130	50	29
31	26	---	23	20	---	88	---	417	---	122	49	---
TOTAL	1104	720	704	639	550	849	3017	8559	19405	7097	2413	1183
MEAN	35.6	24.0	22.7	20.6	19.6	27.4	101	276	647	229	77.8	39.4
MAX	74	28	26	22	21	88	186	515	904	480	120	48
MIN	26	15	20	20	18	19	70	90	423	122	49	29
AC-FT	2190	1430	1400	1270	1090	1680	5980	16980	38490	14080	4790	2350

CAL YR 1977 TOTAL 20328 MEAN 55.7 MAX 289 MIN 11 AC-FT 40320
WTR YR 1978 TOTAL 46240 MEAN 127 MAX 904 MIN 15 AC-FT 91720

09080100 FRYINGPAN RIVER AT MEREDITH, CO

LOCATION.--Lat 39°21'45", long 106°43'55", in SE¼SE¼ sec.11, T.8 S., R.84 W., Eagle County, Hydrologic Unit 14010004, on left bank at Meredith, 0.1 mi (0.2 km) downstream from Waterbury Creek, and 0.7 mi (1.1 km) downstream from Jakeman Creek.

DRAINAGE AREA.--191 mi² (495 km²).

PERIOD OF RECORD.--October 1910 to February 1915 (published as Fryingpan Creek at Thomasville), October 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,780 ft (2,371 m), from topographic map. Oct. 1, 1910, to Feb. 25, 1915, nonrecording gage at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversion for irrigation of hay meadows above station. Transmountain diversions above station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years (water years 1911-14, 1967-71), 234 ft³/s (6.627 m³/s), 169,500 acre-ft/yr (209 hm³/yr), prior to diversion through Charles H. Boustead tunnel; 7 years (water years 1972-78), 140 ft³/s (3.965 m³/s), 101,400 acre-ft/yr (125 hm³/yr), subsequent to diversion through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,120 ft³/s (60.0 m³/s) June 5, 6, 8, 1912, gage height, 4.3 ft (1.31 m), site and datum then in use; minimum daily, 15 ft³/s (0.42 m³/s) Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) at 0230 June 16, gage height, 4.75 ft (1.448 m); from maximum tape indicator; minimum daily, 26 ft³/s (0.74 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	35	30	28	29	32	121	156	590	637	167	58
2	42	37	31	27	28	33	97	157	625	560	150	55
3	45	40	32	28	29	33	91	170	681	530	123	56
4	42	38	32	29	29	33	86	171	730	495	120	53
5	42	38	31	29	29	34	89	150	611	453	115	52
6	47	38	31	29	29	34	80	129	578	419	118	49
7	77	40	31	29	29	33	93	119	688	392	120	46
8	66	38	31	29	29	33	133	123	632	386	114	50
9	55	33	31	29	29	33	146	106	709	388	115	49
10	55	33	31	29	29	33	111	127	964	413	111	51
11	45	33	31	28	29	33	95	163	1070	388	114	56
12	44	32	31	28	29	32	117	165	1010	374	116	57
13	51	32	31	28	29	32	114	195	1060	351	121	55
14	50	33	31	29	29	32	106	318	1130	312	130	50
15	47	32	30	29	29	33	114	490	1140	290	137	47
16	46	31	29	29	29	33	120	618	1170	310	109	46
17	46	31	28	29	26	33	125	651	1010	359	99	47
18	44	31	30	29	27	34	103	430	876	299	98	50
19	43	31	30	29	28	35	96	358	870	255	97	52
20	42	32	29	29	29	37	99	385	885	225	90	54
21	45	32	28	29	29	37	113	457	866	214	82	51
22	44	30	30	29	30	40	108	440	917	198	81	52
23	41	31	31	29	30	40	97	462	943	180	91	53
24	40	31	31	30	30	39	103	549	923	170	85	52
25	39	31	31	30	30	38	140	562	948	173	79	48
26	39	31	31	30	30	40	179	516	817	159	79	45
27	38	32	31	29	31	43	223	523	702	155	73	44
28	38	32	31	28	31	52	179	455	671	152	64	44
29	37	31	30	29	---	59	159	409	652	177	56	43
30	39	31	30	30	---	74	163	461	681	173	60	41
31	37	---	29	30	---	99	---	503	---	154	58	---
TOTAL	1410	1000	944	896	814	1226	3600	10520	25149	9741	3172	1509
MEAN	45.5	33.3	30.5	28.9	29.1	39.5	120	339	838	314	102	50.3
MAX	77	40	32	30	31	99	223	651	1170	637	167	58
MIN	37	30	28	27	26	32	80	106	578	152	56	41
AC-FT	2800	1980	1870	1780	1610	2430	7140	20870	49880	19320	6290	2990

CAL YR 1977 TOTAL 25986 MEAN 71.2 MAX 388 MIN 19 AC-FT 51540
WTR YR 1978 TOTAL 59981 MEAN 164 MAX 1170 MIN 26 AC-FT 119000

09080190 RUEDI RESERVOIR NEAR BASALT, CO

LOCATION.--Lat 39°21'50", long 106°49'05", in NW¼ sec.18, T.8 S., R.84 W., Pitkin County, Hydrologic Unit 14010004, in gatehouse of Ruedi Dam just upstream from Rocky Fork Creek and 13 mi (21 km) east of Basalt.

DRAINAGE AREA.--223 mi² (578 km²).

PERIOD OF RECORD.--May 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in May 1968; dam completed July 16, 1968. Capacity, 102,300 acre-ft (126 hm³), 1969 survey, between elevations 7,540.00 ft (2,298.192 m), sill of auxiliary outlet, and 7,766.00 ft (2,367.077 m), crest of spillway. Dead storage below elevation 7,540.00 ft (2,298.192 m), 61 acre-ft (75,200 m³). Figures given are total contents.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,900 acre-ft (128 hm³) July 15, 1973, elevation, 7,767.56 ft (2,367.552 m); minimum after first filling, 48,000 acre-ft (59.2 hm³) May 13, 1971, elevation, 7,698.03 ft (2,346.360 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 103,100 acre-ft (127 hm³) June 30, elevation, 7,766.74 ft (2,367.302 m); minimum, 59,250 acre-ft (73.1 hm³) May 11, elevation, 7,714.96 ft (2,351.520 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,748.09	85,510	-
Oct. 31	7,747.98	85,410	-100
Nov. 30	7,747.46	84,950	-460
Dec. 31	7,746.93	84,480	-470
CAL YR 1977			+10,170
Jan. 31	7,743.80	81,750	-2,730
Feb. 28	7,735.61	74,880	-6,870
Mar. 31	7,724.76	66,370	-8,510
Apr. 30	7,717.13	60,780	-5,590
May 31	7,729.74	70,180	+9,400
June 30	7,766.74	103,100	+32,920
July 31	7,764.10	100,500	-2,600
Aug. 31	7,762.30	98,720	-1,780
Sept. 30	7,761.90	98,330	-390
WTR YR 1978			+12,820

09080300 ROCKY FORK CREEK NEAR MEREDITH, CO

LOCATION.--Lat 39°21'42", long 106°49'12", in NW¼NW¼ sec.18, T.8 S., R.84 W., Pitkin County, Hydrologic Unit 14010004, on right bank at upstream end of flume constructed to carry Rocky Fork Creek across spillway and auxiliary outlet of Ruedi Dam on Fryingpan River and 4.6 mi (7.4 km) west of Meredith.

DRAINAGE AREA.--12.3 mi² (31.9 km²).

PERIOD OF RECORD.--September 1959 to July 1967 (discharge measurements only), October 1968 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 7,494.50 ft (2,284.324 m) U.S. Bureau of Reclamation bench mark.

REMARKS.--Records good. No diversion or regulation above station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--10 years (water years 1969-78), 9.17 ft³/s (0.260 m³/s), 6,640 acre-ft/yr (8.19 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101 ft³/s (2.86 m³/s) June 14, 1978, gage height, 1.74 ft (0.530 m); minimum daily, 1.4 ft³/s (0.040 m³/s) Jan. 5-7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 82.1 ft³/s (2.33 m³/s) was measured June 7, 1962, and a discharge of 0.24 ft³/s (0.007 m³/s) was measured Apr. 26, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 101 ft³/s (2.86 m³/s) at 1300 June 14, gage height, 1.74 ft (0.530 m), only peak above base of 50 ft³/s (1.4 m³/s); minimum daily, 1.8 ft³/s (0.051 m³/s) Jan. 5-17, 20-25, Feb. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.2	2.1	1.9	1.9	1.9	5.0	9.1	34	39	9.5	4.5
2	2.4	2.1	2.1	1.9	1.9	1.9	4.5	9.1	38	36	9.5	4.5
3	2.4	2.1	2.1	1.9	1.9	1.9	4.3	9.5	41	32	9.5	4.5
4	2.4	2.1	2.2	1.9	1.9	1.9	4.3	9.5	44	29	8.4	4.5
5	2.4	2.1	2.2	1.8	1.9	1.9	5.0	9.8	43	27	8.8	4.5
6	2.4	2.1	2.2	1.8	1.9	1.9	5.2	9.8	43	25	8.8	4.5
7	2.4	2.1	2.1	1.8	1.9	1.9	5.0	9.8	45	23	8.8	4.0
8	2.4	2.2	2.1	1.8	1.9	1.9	5.7	9.8	45	21	8.8	3.8
9	2.4	2.2	1.9	1.8	1.9	1.9	6.5	9.5	50	21	8.8	3.8
10	2.4	2.2	1.9	1.8	1.9	1.9	6.5	9.1	63	20	8.8	4.0
11	2.5	2.2	1.9	1.8	1.9	1.9	6.2	8.8	71	19	8.8	4.0
12	2.5	2.2	1.9	1.8	1.9	1.9	5.7	9.1	72	18	8.8	4.0
13	2.7	2.2	1.9	1.8	1.9	1.9	5.5	9.5	77	16	8.8	4.3
14	2.7	2.2	1.9	1.8	1.9	1.9	5.5	9.5	85	16	8.8	4.3
15	2.5	2.2	1.9	1.8	1.9	1.9	5.5	10	88	15	7.8	4.0
16	2.5	2.1	1.9	1.8	1.9	2.1	5.5	14	86	16	6.8	3.6
17	2.4	2.1	1.9	1.8	1.9	2.1	5.7	26	80	18	6.8	3.6
18	2.4	2.1	1.9	1.9	2.1	2.1	6.2	28	75	14	6.8	3.6
19	2.4	2.1	1.9	1.9	2.2	2.2	6.2	26	70	13	6.8	3.8
20	2.4	2.2	1.9	1.8	2.2	2.4	7.4	23	68	13	6.8	3.8
21	2.4	2.4	1.9	1.8	1.9	2.4	7.4	23	65	12	6.8	3.8
22	2.4	2.4	1.9	1.8	1.8	2.7	7.1	25	65	11	6.8	3.8
23	2.4	2.2	1.9	1.8	1.8	2.7	7.1	27	65	11	7.1	3.8
24	2.4	2.2	1.9	1.8	1.8	2.5	7.1	32	63	10	6.8	3.8
25	2.4	2.2	1.9	1.8	1.9	2.5	6.8	34	60	10	6.5	3.8
26	2.4	2.2	1.9	1.9	2.1	2.7	6.8	34	54	9.8	6.2	3.8
27	2.4	2.2	1.9	1.9	2.1	3.0	7.4	34	49	9.1	6.0	3.8
28	2.4	2.2	1.9	1.9	1.9	3.2	7.8	33	45	9.1	5.7	3.6
29	2.4	2.2	1.9	1.9	---	3.6	8.1	31	43	9.1	5.0	3.4
30	2.4	2.1	1.9	1.9	---	4.0	8.4	31	43	9.1	4.5	3.4
31	2.2	---	1.9	1.9	---	4.7	---	33	---	9.1	4.5	---
TOTAL	75.2	65.3	60.8	57.0	54.1	73.4	185.4	595.9	1770	540.3	232.6	118.6
MEAN	2.43	2.18	1.96	1.84	1.93	2.37	6.18	19.2	59.0	17.4	7.50	3.95
MAX	2.7	2.4	2.2	1.9	2.2	4.7	8.4	34	88	39	9.5	4.5
MIN	2.2	2.1	1.9	1.8	1.8	1.9	4.3	8.8	34	9.1	4.5	3.4
AC-FT	149	130	121	113	107	146	368	1180	3510	1070	461	235

CAL YR 1977 TOTAL 1367.0 MEAN 3.75 MAX 14 MIN 1.4 AC-FT 2710
WTR YR 1978 TOTAL 3828.6 MEAN 10.5 MAX 88 MIN 1.8 AC-FT 7590

09080400 FRYINGPAN RIVER NEAR RUEDI, CO

LOCATION.--Lat 39°21'55", long 106°49'30", in SE¼SE¼ sec.12, T.8 S., R.85 W., Eagle County, Hydrologic Unit 14010004, on right bank 0.4 mi (0.6 km) downstream from Rocky Fork Creek and Ruedi Dam, 1.5 mi (2.4 km) west of former site of Ruedi, and 12.5 mi (20.1 km) east of Basalt.

DRAINAGE AREA.--238 mi² (616 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,473.25 ft (2,277.847 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 7, 1970, at site 2.0 mi (3.2 km) downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of hay meadows above station. Transmountain diversions above station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Flow regulated by Ruedi Reservoir (station 09080190) since May 18, 1968. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--11 years (water years 1968-78), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr), subsequent to completion of Ruedi Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,690 ft³/s (76.2 m³/s) June 18, 1965, gage height, 5.16 ft (1.573 m), site and datum then in use; minimum daily, 16 ft³/s (0.45 m³/s) Feb. 2, 1968 (result of storage in Ruedi Reservoir); minimum daily prior to construction of Ruedi Reservoir, 28 ft³/s (0.79 m³/s) Mar. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 820 ft³/s (5.10 m³/s) June 30, July 1, gage height, 3.03 ft (0.924 m); minimum daily, 43 ft³/s (1.22 m³/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	49	49	50	114	165	180	246	254	820	152	84
2	43	49	49	50	149	162	180	246	263	804	152	93
3	45	50	49	50	162	162	180	246	263	780	171	93
4	48	50	49	50	162	162	180	246	267	772	171	93
5	48	50	49	63	162	162	207	246	267	764	171	85
6	49	50	50	72	162	162	238	246	267	756	171	73
7	61	50	49	72	162	174	238	246	267	592	177	66
8	80	50	49	72	162	200	238	246	276	618	177	73
9	80	49	49	72	162	200	242	246	281	618	174	81
10	80	49	49	72	165	200	242	246	295	542	174	81
11	80	49	49	73	165	200	242	246	319	436	174	70
12	68	49	49	73	165	196	242	242	319	404	174	62
13	50	49	49	73	165	196	242	242	324	404	174	62
14	50	49	49	73	165	196	242	242	350	365	174	62
15	50	48	49	74	165	196	242	242	360	309	171	62
16	51	48	49	84	165	196	242	238	382	276	171	62
17	56	49	49	100	165	193	242	246	426	272	140	62
18	63	49	49	100	168	193	242	250	426	309	105	62
19	63	50	49	100	168	193	242	254	431	314	94	62
20	53	49	49	100	165	193	242	250	442	263	94	62
21	49	49	49	100	165	193	242	250	470	245	113	62
22	49	49	49	100	165	189	242	250	492	229	131	62
23	49	49	50	100	165	189	242	250	597	200	102	62
24	49	49	50	100	165	189	242	250	692	177	90	62
25	49	49	50	100	162	189	242	254	692	162	100	62
26	49	49	50	102	162	189	242	259	692	162	105	68
27	49	50	50	102	162	186	242	254	700	162	105	74
28	49	50	50	102	162	186	242	254	748	159	93	66
29	49	50	50	103	---	183	242	254	812	159	82	57
30	49	49	50	103	---	180	246	254	820	159	56	51
31	49	---	50	103	---	180	---	250	---	159	53	---
TOTAL	1700	1478	1529	2588	4526	5754	6969	7691	13194	12492	4231	2076
MEAN	54.8	49.3	49.3	83.5	162	186	232	248	440	403	136	69.2
MAX	80	50	50	103	168	200	246	259	820	820	177	93
MIN	43	48	49	50	114	162	180	238	254	159	53	51
AC-FT	3370	2930	3030	5130	8980	11410	13820	15260	26170	24780	8390	4120

CAL YR 1977 TOTAL 24953 MEAN 68.4 MAX 180 MIN 31 AC-FT 49490
WTR YR 1978 TOTAL 64228 MEAN 176 MAX 820 MIN 43 AC-FT 127400

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09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO

LOCATION.--Lat 39°13'56", long 107°13'36", in SE¼SW¼ sec.33, T.9 S., R.88 W., Pitkin County, Hydrologic Unit 14010004, on right bank 1.2 mi (1.9 km) upstream from Avalanche Creek and 3.6 mi (5.8 km) north of Redstone.

DRAINAGE AREA.--167 mi² (433 km²).

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,905 ft (2,015 m), from river-profile map.

REMARKS.--Records good except those for estimated period, which are fair. A few small diversions for irrigation above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 281 ft³/s (7.958 m³/s), 203,600 acre-ft/yr (251 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,980 ft³/s (113 m³/s) July 1, 1957, gage height, 5.65 ft (1.722 m); minimum daily, 22 ft³/s (0.62 m³/s) Dec. 5, 1955, Feb. 15, 1964, Jan. 2, Feb. 17, 18, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 2,330 ft³/s (66.0 m³/s) at 0200 June 25, gage height, 4.99 ft (1.521 m) but peak could have occurred during period of no gage-height record June 12-19, only recorded peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 22 ft³/s (0.62 m³/s) Jan. 2, Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	42	35	27	35	38	167	244	1020	1400	261	101
2	47	41	40	22	28	42	151	232	1140	1330	251	100
3	46	43	41	32	30	43	141	239	1180	1240	233	98
4	46	42	40	37	38	41	133	256	1150	1130	220	95
5	47	42	38	38	33	42	141	243	978	1020	233	92
6	49	42	32	37	38	40	133	221	921	958	195	92
7	86	46	42	36	37	39	161	200	1050	904	193	102
8	61	44	38	29	37	39	202	181	1040	909	190	99
9	58	36	33	38	35	42	199	175	1300	935	183	92
10	57	37	39	38	37	46	162	185	1720	936	177	93
11	54	41	36	37	36	45	162	196	1670	943	171	98
12	52	40	38	36	35	44	193	201	1700	932	168	92
13	52	38	33	35	34	42	205	236	1800	872	181	88
14	51	38	40	32	32	41	193	345	2000	767	169	85
15	50	38	38	38	30	39	196	512	2100	755	181	79
16	48	38	38	36	30	38	197	599	2300	737	153	77
17	48	37	27	36	22	40	204	606	2100	949	142	82
18	47	38	39	36	22	47	179	617	1900	724	142	100
19	47	39	36	30	32	49	182	547	1750	637	137	98
20	47	34	32	37	33	51	207	620	1690	573	130	92
21	49	37	25	36	33	60	234	697	1610	567	129	87
22	48	42	33	34	30	69	213	716	1760	508	132	85
23	47	40	37	34	32	64	208	898	1810	433	130	83
24	46	38	39	33	34	63	244	1040	1860	402	126	81
25	45	39	38	32	36	57	315	1070	2060	374	121	81
26	45	38	33	35	36	64	334	1010	1740	366	117	80
27	43	38	33	34	35	82	308	1050	1470	351	113	79
28	42	40	40	26	35	101	278	827	1480	347	109	79
29	42	38	38	36	---	121	268	743	1480	347	107	76
30	47	38	38	36	---	134	262	889	1540	316	104	74
31	44	---	36	34	---	156	---	948	---	288	102	---
TOTAL	1540	1184	1125	1057	925	1819	6172	16743	47319	22950	5000	2660
MEAN	49.7	39.5	36.3	34.1	33.0	58.7	206	540	1577	740	161	88.7
MAX	86	46	42	38	38	156	334	1070	2300	1400	261	102
MIN	42	34	25	22	22	38	133	175	921	288	102	74
AC-FT	3050	2350	2230	2100	1830	3610	12240	33210	93860	45520	9920	5280

CAL YR 1977 TOTAL 37517 MEAN 103 MAX 736 MIN 25 AC-FT 74410
WTR YR 1978 TOTAL 108494 MEAN 297 MAX 2300 MIN 22 AC-FT 215200

09082800 NORTH THOMPSON CREEK NEAR CARBONDALE, CO

LOCATION.--Lat 39°19'47", long 107°19'58", in NW¼SE¼ sec.28, T.8 S., R.89 W., Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi (0.6 km) downstream from Yank Creek and 8.5 mi (13.7 km) southwest of Carbondale.

DRAINAGE AREA.--26.8 mi² (69.4 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,120 ft (2,475 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record and ice effect, which are poor. Transbasin diversion above station by Thompson Creek feeder ditch for irrigation in west Divide Creek basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 16.2 ft³/s (0.459 m³/s), 11,740 acre-ft/yr (14.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) May 22, 1970, gage height, 4.00 ft (1.219 m), from rating curve extended above 170 ft³/s (4.8 m³/s); maximum gage height, 4.05 ft (1.234 m) May 17, 1964; no flow Aug. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 30	2000	236	6.68	*3.63	1.106	June 10	2100	*248	7.02	3.43	1.045

Minimum daily discharge, 0.55 ft³/s (0.016 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	1.3	1.1	1.1	1.0	1.2	7.5	25	151	20	2.6	.78
2	.56	1.3	1.1	1.0	1.0	1.3	6.6	27	155	16	2.5	.72
3	.56	1.2	1.1	1.1	1.0	1.4	6.5	39	141	14	2.1	.70
4	.55	1.2	1.1	1.1	1.0	1.3	12	40	133	11	1.9	.66
5	.69	1.2	1.1	1.1	1.0	1.3	5.8	29	125	9.4	1.8	.62
6	.95	1.2	1.1	1.1	1.0	1.3	6.2	20	117	9.2	1.5	.61
7	2.7	1.2	1.1	1.1	1.0	1.3	7.3	14	126	8.1	1.5	.71
8	1.4	1.2	1.1	1.1	1.0	1.4	9.3	10	137	7.1	1.4	1.5
9	1.1	1.2	1.1	1.1	1.0	1.7	12	11	160	7.7	1.4	.91
10	1.2	1.2	1.1	1.1	1.0	1.9	19	16	205	8.0	1.8	.78
11	1.2	1.2	1.1	1.1	1.0	1.8	18	20	214	11	1.5	.85
12	1.2	1.2	1.1	1.1	1.0	1.8	12	20	184	9.4	1.5	.87
13	1.4	1.2	1.1	1.1	1.0	1.8	13	30	174	7.2	1.4	.83
14	1.5	1.2	1.1	1.1	1.0	1.8	14	67	177	6.5	1.3	.82
15	1.4	1.2	1.1	1.1	1.0	1.9	16	107	169	6.3	1.5	.80
16	1.4	1.2	1.1	1.1	.94	2.0	16	138	153	7.1	1.2	.80
17	1.4	1.2	1.1	1.1	.85	2.2	15	114	123	8.1	.97	1.1
18	1.4	1.1	1.1	1.1	.90	2.4	14	64	101	6.4	.99	1.7
19	1.4	1.1	1.1	1.1	.98	2.6	11	58	100	5.7	1.0	1.6
20	1.4	1.1	1.1	1.1	1.0	2.8	12	70	89	5.1	1.1	1.5
21	1.4	1.1	1.0	1.1	1.0	3.1	16	98	81	4.8	1.2	1.3
22	1.3	1.1	1.1	1.1	1.0	3.6	14	134	79	4.1	1.4	1.3
23	1.3	1.1	1.1	1.0	1.0	3.4	13	156	71	3.8	1.3	1.4
24	1.3	1.1	1.1	1.0	1.0	3.2	17	168	49	3.6	1.0	1.3
25	1.3	1.1	1.1	1.0	1.1	3.0	25	153	43	3.4	.98	1.1
26	1.3	1.1	1.1	1.0	1.1	3.7	34	153	37	3.3	.95	1.1
27	1.3	1.1	1.1	1.0	1.1	4.5	50	142	31	3.0	.81	1.0
28	1.3	1.1	1.1	.90	1.1	8.7	35	112	32	2.8	.73	1.1
29	1.3	1.1	1.1	.98	---	11	26	132	28	2.7	.72	.87
30	1.3	1.1	1.1	.98	---	11	25	169	25	2.6	.69	1.0
31	1.3	---	1.1	.98	---	6.6	---	164	---	2.4	.79	---
TOTAL	38.37	34.9	34.0	32.94	28.07	97.0	488.2	2500	3410	219.8	41.33	30.35
MEAN	1.24	1.16	1.10	1.06	1.00	3.13	16.3	80.6	114	7.09	1.35	1.01
MAX	2.7	1.3	1.1	1.1	1.1	11	50	169	214	20	2.6	1.7
MIN	.55	1.1	1.0	.90	.85	1.2	5.8	10	25	2.4	.69	.61
AC-FT	76	69	67	65	56	192	968	4960	6760	436	83	60

CAL YR 1977 TOTAL 1004.42 MEAN 2.75 MAX 44 MIN .00 AC-FT 1990
WTR YR 1978 TOTAL 6955.46 MEAN 19.1 MAX 214 MIN .55 AC-FT 13800

NOTE.--NO GAGE-HEIGHT RECORD NOV. 2 TO MAR. 27.

09083800 CRYSTAL RIVER BELOW CARBONDALE, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to January 1978 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
13...	0900	24	650	7.5	7.0	9.3	7	380	180
NOV									
17...	0745	30	630	7.5	5.0	9.8	31	340	170
DEC									
12...	1445	30	680	7.4	5.0	10.4	11	320	160
JAN									
18...	0800	30	670	7.6	2.0	10.2	24	340	200

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
13...	120	20	14	.3	2.5	250	0	210	180
NOV									
17...	110	17	19	.4	2.2	210	0	170	190
DEC									
12...	100	17	21	.5	2.2	190	0	160	210
JAN									
18...	110	16	21	.5	2.1	170	0	140	220

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT									
13...	5.0	.2	15	482	.51	.01	.00	.01	.00
NOV									
17...	8.8	.2	13	465	.28	.03	.05	.08	.02
DEC									
12...	8.3	.3	12	466	.28	.10	.00	.05	.02
JAN									
18...	9.5	.3	12	476	.25	.06	2.8	2.9	.02

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT								
13...	0900	1	50	1	10	.0	0	.9
JAN								
18...	0800	0	20	1	10	.0	0	.6

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°32'37", long 107°19'44", in SW¼SE¼ sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010004, on left bank at Glenwood Springs, 2,100 ft (640 m) upstream from mouth.

DRAINAGE AREA.--1,451 mi² (3,758 km²).

PERIOD OF RECORD.--October 1905 to September 1909, September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Roaring Fork at Glenwood Springs.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,720.73 ft (1,743.679 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1915, nonrecording gage on highway bridge 800 ft (240 m) downstream at different datum. Nov. 20, 1915, to Oct. 26, 1917, nonrecording gage at present site and datum.

REMARKS.--Records good. Diversions above station for irrigation of about 35,000 acres (142 km²). Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel since 1925, Twin Lakes tunnel since 1935, and Charles H. Boustead tunnel since 1972 (see elsewhere in this report). Natural flow of stream affected by storage in Ruedi Reservoir on Fryingpan River (station 09080190) since May 1968. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--65 years (water years 1906-9, 1911-71), 1,368 ft³/s (38.74 m³/s), 991,100 acre-ft/yr (1,220 hm³/yr), prior to diversion through Charles H. Boustead tunnel; 7 years (water years 1972-78), 1,067 ft³/s (30.22 m³/s), 773,000 acre-ft/yr (953 hm³/yr), subsequent to diversions through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s (538 m³/s) July 1, 1957, gage height, 8.65 ft (2.633 m); maximum gage height, 8.7 ft (2.65 m) June 14, 1921, from floodmarks; minimum discharge, 145 ft³/s (4.11 m³/s) Jan. 21, 1935, gage height, 0.65 ft (0.198 m); minimum daily, 179 ft³/s (5.07 m³/s) Jan. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,220 ft³/s (233 m³/s) at 0600 June 16, gage height, 5.98 ft (1.823 m); minimum daily, 280 ft³/s (7.93 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	405	395	316	385	452	970	1100	2700	5090	950	474
2	325	405	415	280	370	486	896	1020	3070	4760	950	469
3	335	410	425	340	400	512	834	1020	3260	4520	914	469
4	345	405	420	400	452	480	775	1050	3460	4150	878	469
5	355	395	410	380	415	486	784	1030	3200	3740	826	464
6	350	390	375	390	452	506	800	1070	2960	3500	809	447
7	390	395	420	385	442	486	826	1070	3160	3200	792	447
8	420	390	410	360	436	500	905	1030	3280	3050	759	458
9	410	390	355	375	420	506	1040	970	3660	3100	735	469
10	395	390	405	390	442	512	970	1000	4610	3240	727	474
11	410	410	380	380	430	512	896	1040	5290	3090	727	480
12	390	420	405	375	425	519	950	1050	5240	3010	727	474
13	380	420	370	370	415	512	970	1140	5450	2880	751	469
14	375	420	390	350	410	506	950	1410	6010	2540	792	469
15	380	405	385	380	425	486	980	1950	6500	2410	809	464
16	375	395	390	375	425	480	990	2470	7230	2390	743	464
17	380	400	335	380	400	500	1000	2830	6160	2810	688	464
18	390	415	390	395	385	526	932	2170	5480	2410	635	474
19	395	425	375	370	415	538	914	1790	5330	2180	612	512
20	405	410	335	395	442	545	932	1830	5570	2000	620	532
21	400	390	294	390	436	560	990	2080	5430	1900	612	519
22	400	458	340	370	415	605	970	2120	5690	1750	650	526
23	400	442	447	360	420	605	941	2290	6060	1480	620	506
24	405	430	395	375	425	598	941	2630	6260	1370	560	486
25	410	430	385	365	442	568	1030	2810	6890	1240	568	480
26	405	425	345	385	447	560	1120	2610	6190	1200	560	464
27	385	420	345	385	447	582	1330	2740	5330	1110	552	464
28	390	425	390	350	447	628	1240	2340	5270	1050	532	452
29	385	410	375	375	---	672	1130	2090	5330	1060	500	425
30	395	415	370	400	---	727	1140	2340	5480	1060	493	425
31	400	---	375	375	---	784	---	2610	---	990	480	---
TOTAL	11900	12340	11846	11516	11865	16939	29146	54700	149550	78280	21571	14189
MEAN	384	411	382	371	424	546	972	1765	4985	2525	696	473
MAX	420	458	447	400	452	784	1330	2830	7230	5090	950	532
MIN	320	390	294	280	370	452	775	970	2700	990	480	425
AC-FT	23600	24480	23500	22840	23530	33600	57810	108500	296600	155300	42790	28140

CAL YR 1977 TOTAL 163194 MEAN 447 MAX 2050 MIN 248 AC-FT 323700
WTR YR 1978 TOTAL 423842 MEAN 1161 MAX 7230 MIN 280 AC-FT 840700

09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'18", long 107°20'13", in NE¼NE¼ sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010005, on left bank 0.6 mi (1.0 km) downstream from Roaring Fork River and 1.0 mi (1.6 km) northwest of Post Office in Glenwood Springs.

DRAINAGE AREA.--6,013 mi^2 (15,574 km^2).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,700.75 ft (1,737.589 m) Colorado State Highway Department datum.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of 110,000 acres (445 km^2). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 3,256 ft^3/s (92.21 m^3/s), 2,359,000 acre-ft/yr (2,910 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,500 ft^3/s (581 m^3/s) June 15, 1975, gage height, 9.48 ft^3/s (2.890 m); minimum daily, 910 ft^3/s (25.6 m^3/s) Mar. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,400 ft^3/s (549 m^3/s) at 1100 June 16, gage height, 9.10 ft (2.774 m); minimum daily, 912 ft^3/s (25.8 m^3/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	1240	1180	1070	1270	1380	2470	3460	9130	10500	3170	1830
2	1550	1240	1180	913	1200	1420	2630	3340	9600	9600	3120	1640
3	1590	1250	1240	991	1230	1490	2580	3320	9720	9230	2970	1960
4	1580	1260	1320	1200	1340	1440	2450	3540	10200	8680	2810	1960
5	1330	1230	1310	1300	1260	1430	2370	3610	9800	7960	2650	1930
6	1480	1220	1210	1270	1370	1470	2340	3550	9400	7410	2490	1820
7	1630	1220	1150	1240	1360	1430	2290	3350	9880	6930	2420	1870
8	1760	1190	1230	1160	1370	1460	2430	3170	10100	6790	2290	1880
9	1770	1170	1160	1140	1320	1420	2780	3000	10900	6750	2230	1970
10	1680	1100	1150	1250	1360	1450	2780	2970	13100	6860	2160	2020
11	1660	1170	1200	1250	1330	1430	2580	3160	15700	6710	2150	2050
12	1630	1160	1210	1240	1330	1400	2450	3380	16200	6680	2420	2090
13	1530	1100	1160	1210	1300	1380	2590	3580	16400	6450	2530	2090
14	1480	1090	1210	1140	1280	1380	2610	4160	17000	6010	2590	2020
15	1480	1080	1260	1250	1300	1330	2650	5650	17300	5850	2730	1970
16	1470	1070	1290	1260	1300	1270	2710	7370	18300	5920	2630	1960
17	1360	1070	1060	1220	1190	1320	2800	8770	16700	6340	2530	1950
18	1190	1160	1150	1280	1150	1340	2710	8210	14800	6140	2370	1980
19	1210	1190	1110	1180	1200	1360	2550	7200	13900	5660	2190	2070
20	1180	1200	992	1250	1270	1410	2470	6710	13500	5370	2050	2170
21	1170	1070	912	1220	1330	1490	2530	7060	13000	5140	1920	2140
22	1170	1160	922	1210	1300	1530	2520	7520	13100	4920	1970	2100
23	1220	1220	1110	1210	1290	1580	2530	8210	13500	4500	2130	2050
24	1200	1230	1240	1190	1280	1550	2490	9210	13700	4270	2050	1940
25	1200	1240	1290	1140	1310	1490	2540	9920	14400	3940	2040	1920
26	1190	1250	1180	1260	1350	1440	2760	9780	13300	3630	2060	1900
27	1170	1270	1140	1300	1340	1500	3400	9870	11500	3440	2010	1870
28	1170	1260	1210	1120	1380	1550	3630	9110	10900	3310	1950	1870
29	1160	1230	1300	1150	---	1690	3470	8470	10700	3280	1850	1850
30	1210	1230	1290	1280	---	1810	3450	8540	10800	3340	1840	1850
31	1260	---	1240	1260	---	2020	---	9010	---	3290	1830	---
TOTAL	43220	35570	36606	37154	36310	45660	80560	188200	386530	185100	72000	58920
MEAN	1394	1186	1181	1199	1297	1473	2685	6071	12880	5971	2323	1964
MAX	1770	1270	1320	1300	1380	2020	3630	9920	18300	10500	3170	2170
MIN	1160	1070	912	913	1150	1270	2290	2970	9130	3280	1830	1820
AC-FT	85730	70550	72610	73690	72020	90570	159800	373300	766700	367100	142800	116900

CAL YR 1977 TOTAL 568354 MEAN 1557 MAX 4330 MIN 910 AC-FT 1127000
WTR YR 1978 TOTAL 1205830 MEAN 3304 MAX 18300 MIN 912 AC-FT 2392000

09085200 CANYON CREEK ABOVE NEW CASTLE, CO

LOCATION.--Lat 39°36'19", long 107°24'21", in NW¼NW¼ sec.24, T.5 S., R.90 W., Garfield County, Hydrologic Unit 14010005, on right bank 200 ft (61 m) upstream from diversion headgate, 0.4 mi (0.6 km) upstream from East Canyon Creek, and 5.0 mi (8.0 km) northeast of New Castle.

DRAINAGE AREA.--23.6 mi² (61.6 km²).

PERIOD OF RECORD.--March 1969 to current year.

REVISED RECORDS.--WRD Colo. 1973: 1972(M).

GAGE.--Water-stage recorder. Altitude of gage is 6,180 ft (1,884 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. A few small diversions for irrigation of hay meadows above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 50.3 ft³/s (1.424 m³/s), 36,440 acre-ft/yr (44.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 932 ft³/s (26.4 m³/s) June 8, 1975, gage height, 4.86 ft (1.481 m); maximum gage height, 5.04 ft (1.536 m) June 5, 1975; minimum daily discharge, 5.6 ft³/s (0.16 m³/s) Aug. 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 900 ft³/s (25.5 m³/s), sometime during period June 10-12, only peak above base of 350 ft³/s (9.9 m³/s); minimum daily, 7.5 ft³/s (0.21 m³/s) Oct. 1-5, Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	11	10	11	9.5	9.7	31	45	237	239	30	14
2	7.5	11	10	10	9.5	10	29	43	257	216	27	14
3	7.5	12	11	11	8.9	10	28	48	285	193	25	14
4	7.5	11	11	11	9.0	10	25	49	326	174	24	13
5	7.5	11	11	11	9.0	10	24	49	303	155	23	13
6	8.0	12	10	11	9.0	11	22	47	277	144	23	13
7	8.5	12	11	11	9.0	10	22	43	320	129	22	14
8	8.6	12	10	11	9.0	10	25	39	340	117	21	14
9	9.0	11	11	10	9.0	10	29	36	410	108	19	14
10	8.9	11	11	11	9.5	10	28	37	600	103	18	13
11	9.3	11	11	10	9.3	10	27	42	900	102	18	14
12	9.4	11	11	10	8.6	10	29	42	500	95	19	14
13	9.5	11	11	10	8.5	10	30	47	520	90	22	14
14	9.5	11	10	10	8.5	10	30	67	530	84	23	14
15	9.5	11	11	10	8.4	10	29	125	435	77	23	13
16	9.3	11	11	10	8.1	10	30	185	505	72	22	13
17	9.5	10	10	10	7.5	11	30	200	496	67	21	15
18	10	11	11	10	7.7	11	28	159	434	63	21	14
19	10	11	10	10	7.7	11	28	137	421	60	19	15
20	10	10	9.9	10	8.6	12	28	136	400	57	19	15
21	10	10	10	10	9.0	12	30	168	412	48	18	15
22	11	11	9.6	10	9.4	14	30	200	431	42	18	15
23	11	12	10	10	9.3	14	28	236	452	40	18	14
24	10	11	11	9.4	9.2	14	28	245	466	37	17	14
25	10	11	11	9.5	9.1	14	32	235	437	36	16	14
26	11	11	11	9.7	9.2	14	39	220	364	33	16	13
27	11	11	11	9.7	9.3	14	51	222	324	33	16	14
28	11	11	11	9.5	9.4	15	49	215	308	31	16	15
29	11	10	11	9.7	---	15	46	247	284	31	15	15
30	12	11	10	9.5	---	17	47	309	266	30	15	16
31	12	---	11	9.5	---	22	---	297	---	30	15	---
TOTAL	296.5	331	328.5	314.5	248.2	370.7	932	4170	12240	2736	619	422
MEAN	9.56	11.0	10.6	10.1	8.86	12.0	31.1	135	408	88.3	20.0	14.1
MAX	12	12	11	11	9.5	22	51	309	900	239	30	16
MIN	7.5	10	9.6	9.4	7.5	9.7	22	36	237	30	15	13
AC-FT	588	657	652	624	492	735	1850	8270	24280	5430	1230	837

CAL YR 1977 TOTAL 6674.8 MEAN 18.3 MAX 141 MIN 5.6 AC-FT 13240
WTR YR 1978 TOTAL 23008.4 MEAN 63.0 MAX 900 MIN 7.5 AC-FT 45640

09085300 EAST CANYON CREEK NEAR NEW CASTLE, CO

LOCATION.--Lat 39°36'33", long 107°26'03", in SE¼SE¼ sec.13, T.5 S., R.90 W., Garfield County, Hydrologic Unit 14010005, on left bank at upstream side of Forest Service stock trail bridge, 0.6 mi (1.0 km) upstream from Possum Creek, 0.9 mi (1.4 km) upstream from mouth, and 6.0 mi (9.7 km) northeast of New Castle.

DRAINAGE AREA.--15.1 mi² (39.1 km²).

PERIOD OF RECORD.--March 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,280 ft (1,914 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Small diversions above station for irrigation of hay meadows. Diversion by Buster No. 1 ditch about 100 ft (30 m) above gage began May 16, 1974; capacity of ditch, about 1.5 ft³/s (0.04 m³/s). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 22.9 ft³/s (0.649 m³/s), 16,590 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 956 ft³/s (27.1 m³/s) June 11, 1978, gage height, 3.42 ft (1.042 m), from rating curve extended above 210 ft³/s (5.9 m³/s); minimum daily, 2.1 ft³/s (0.059 m³/s) Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 956 ft³/s (27.1 m³/s) at 0400 June 11, gage height, 3.42 ft (1.042 m), only peak above base of 150 ft³/s (4.2 m³/s); minimum daily, 2.2 ft³/s (0.062 m³/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.7	3.0	3.1	3.5	4.6	20	18	102	189	11	5.6
2	3.0	2.9	2.9	3.1	3.6	5.2	17	18	104	176	10	5.3
3	3.0	3.2	2.9	3.1	3.6	5.2	15	19	115	175	10	5.0
4	3.0	3.4	3.0	3.1	3.6	5.2	14	20	165	153	10	4.6
5	2.7	3.7	3.0	3.1	3.8	5.5	14	19	150	131	9.8	4.6
6	2.8	3.9	3.0	3.2	3.9	5.3	12	18	148	116	9.8	4.6
7	5.6	3.9	3.0	3.2	4.0	5.0	13	17	156	103	9.6	5.3
8	4.8	3.5	3.0	3.2	4.0	5.1	14	15	141	70	9.4	5.6
9	4.0	2.8	3.0	3.2	4.0	5.0	16	14	198	74	9.2	5.3
10	3.7	3.2	3.0	3.2	4.0	5.3	14	15	330	74	12	5.3
11	3.3	3.3	3.0	3.2	4.0	5.3	13	15	680	84	11	5.9
12	3.3	3.3	3.0	3.2	4.0	5.3	14	15	367	60	9.2	5.9
13	3.4	3.3	3.0	3.2	4.0	5.3	15	16	409	50	9.0	6.2
14	3.7	3.2	3.0	3.2	4.0	5.2	15	26	381	40	10	5.6
15	3.5	3.2	3.0	3.2	4.3	5.1	14	45	374	33	11	5.6
16	3.2	3.2	3.0	3.2	4.0	5.1	15	62	333	36	9.0	5.6
17	2.9	3.2	3.0	3.2	4.3	5.4	15	68	340	45	7.8	8.2
18	2.7	3.3	3.0	3.2	4.3	5.7	13	47	258	35	8.0	6.6
19	2.4	3.3	3.0	3.3	4.6	6.4	13	37	258	27	8.4	6.6
20	2.2	3.1	3.0	3.3	4.0	6.7	14	40	306	21	8.6	6.6
21	2.3	3.4	3.0	3.3	2.9	7.0	15	49	262	19	9.0	6.9
22	2.7	3.2	3.0	3.3	2.9	8.0	14	57	258	17	10	6.9
23	2.8	3.0	3.0	3.3	3.2	7.8	13	65	245	16	8.0	6.9
24	2.6	3.0	3.0	3.3	3.8	7.7	13	61	282	16	5.9	6.6
25	2.5	3.0	2.9	3.3	4.0	7.3	15	59	298	15	5.6	6.5
26	2.3	3.0	2.9	3.3	4.1	7.4	18	56	280	14	5.3	6.6
27	2.5	2.9	3.0	3.3	4.3	8.4	20	61	244	13	5.6	6.2
28	2.4	3.0	3.1	3.0	4.3	9.6	20	61	249	13	5.6	6.2
29	2.6	2.8	3.1	3.1	---	11	18	73	204	12	5.3	6.2
30	3.4	3.0	3.1	3.3	---	13	18	106	205	12	5.6	5.9
31	3.1	---	3.1	3.4	---	15	---	125	---	11	5.6	---
TOTAL	95.4	95.9	93.0	99.6	109.0	209.1	454	1317	7842	1850	264.3	179.0
MEAN	3.08	3.20	3.00	3.21	3.89	6.75	15.1	42.5	261	59.7	8.53	5.97
MAX	5.6	3.9	3.1	3.4	4.6	15	20	125	680	189	12	8.2
MIN	2.2	2.7	2.9	3.0	2.9	4.6	12	14	102	11	5.3	4.6
AC-FT	189	190	184	198	216	415	901	2610	15550	3670	524	355

CAL YR 1977 TOTAL 2423.8 MEAN 6.64 MAX 37 MIN 2.1 AC-FT 4810
WTR YR 1978 TOTAL 12608.3 MEAN 34.5 MAX 680 MIN 2.2 AC-FT 25010

09085400 POSSUM CREEK NEAR NEW CASTLE, CO

LOCATION.--Lat 39°35'52", long 107°25'24", in SW¼ sec.19, T.5 S., R.89 W., Garfield County, Hydrologic unit 14010005, on right bank 1.0 mi (1.6 km) upstream from mouth and 6.0 mi (9.7 km) northeast of New Castle.

DRAINAGE AREA.--6.41 mi^2 (16.60 km^2).

PERIOD OF RECORD.--March 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,410 ft (1,954 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 5.56 ft^3/s (0.157 m^3/s), 4,030 acre-ft/yr (4.97 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85 ft^3/s (2.41 m^3/s) Aug. 25, 1977, gage height, 2.49 ft (0.759 m), from floodmarks in well; minimum daily, 0.44 ft^3/s (0.012 m^3/s) Feb. 22, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft^3/s (2.27 m^3/s) at 0300 June 11, gage height, 2.52 ft (0.768 m), only peak above base of 30 ft^3/s (0.85 m^3/s); minimum daily, 0.44 ft^3/s (0.012 m^3/s) Feb. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	1.0	1.0	.86	.78	.80	4.1	5.4	35	17	6.9	3.6
2	.85	1.0	1.0	.86	.78	.86	3.6	5.4	35	16	6.8	3.5
3	.80	1.0	1.0	.88	.78	.90	3.2	5.4	38	15	6.5	3.5
4	.78	.99	1.0	.90	.78	.90	2.9	5.7	41	14	6.5	3.4
5	.81	.97	1.0	.90	.78	.92	2.9	6.1	40	13	6.4	3.4
6	.96	1.0	1.0	.90	.78	.94	2.7	5.9	39	13	6.2	3.3
7	1.0	1.1	1.0	.90	.78	.96	2.8	5.5	43	12	6.1	3.4
8	.88	1.2	.98	.90	.78	.98	3.3	5.1	34	12	6.0	3.4
9	.91	.90	.98	.90	.78	.98	3.6	4.9	37	12	6.0	3.3
10	.82	.92	.98	.86	.78	.98	3.4	4.6	59	11	5.8	3.2
11	.82	1.0	.98	.82	.76	.98	3.0	5.1	65	9.5	5.6	3.3
12	.82	1.1	.98	.82	.64	.98	3.2	5.1	59	12	5.7	3.3
13	.82	1.0	.96	.82	.58	.98	3.4	5.1	59	12	5.8	3.3
14	.81	.95	.96	.84	.54	1.0	3.5	8.3	52	9.2	6.0	3.2
15	.80	1.0	.94	.82	.52	1.0	3.5	12	49	8.6	5.6	3.1
16	.81	1.0	.94	.86	.52	1.0	3.6	24	49	12	5.2	3.1
17	.81	1.0	.94	.84	.50	1.1	3.8	33	53	10	4.9	3.2
18	.81	1.1	.94	.82	.50	1.5	3.6	26	46	9.6	5.0	3.2
19	.81	1.1	.94	.85	.49	1.5	3.4	23	41	9.4	4.9	3.3
20	.82	1.0	.94	.82	.47	1.7	3.3	23	39	9.0	4.7	3.2
21	.82	1.0	.94	.82	.46	1.7	3.6	28	33	8.7	4.5	3.1
22	.85	1.1	.94	.82	.44	2.0	3.5	31	31	8.4	4.6	3.0
23	.85	1.1	.92	.82	.46	1.9	3.5	28	29	8.2	4.4	2.9
24	.89	1.1	.92	.82	.48	1.9	3.4	24	26	8.0	4.2	2.9
25	.95	1.1	.90	.82	.54	1.8	3.6	30	24	7.9	4.1	2.9
26	.93	1.1	.90	.82	.68	1.8	4.4	38	22	7.6	3.9	2.8
27	.90	1.1	.90	.82	.74	1.9	5.3	37	19	7.4	3.9	2.8
28	.90	1.0	.90	.82	.80	2.2	5.4	33	19	7.2	3.8	2.7
29	.93	1.0	.88	.78	---	2.5	5.4	35	19	7.2	3.7	2.7
30	1.1	1.0	.88	.78	---	2.8	5.5	39	18	7.1	3.7	2.7
31	1.0	---	.88	.78	---	3.1	---	39	---	6.9	3.6	---
TOTAL	26.92	30.93	29.42	26.07	17.92	44.56	110.4	580.6	1153	321.0	161.0	94.7
MEAN	.87	1.03	.95	.84	.64	1.44	3.68	18.7	38.4	10.4	5.19	3.16
MAX	1.1	1.2	1.0	.90	.80	3.1	5.5	39	65	17	6.9	3.6
MIN	.78	.90	.88	.78	.44	.80	2.7	4.6	18	6.9	3.6	2.7
AC-FT	53	61	58	52	36	88	219	1150	2290	637	319	188

CAL YR 1977 TOTAL 590.81 MEAN 1.62 MAX 5.5 MIN .78 AC-FT 1170
WTR YR 1978 TOTAL 2596.52 MEAN 7.11 MAX 65 MIN .44 AC-FT 5150

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO

LOCATION.--Lat 39°19'52", long 107°34'46", in W½ sec.29, T.8 S., R.91 W., Mesa County, Hydrologic unit 14010005, on left bank 10 ft (3 m) downstream from private road bridge, 0.8 mi (1.3 km) upstream from Brook Creek, 8 mi (13 km) south of Raven, and 16 mi (26 km) south of Silt.

DRAINAGE AREA.--64.6 mi² (167.3 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,050 ft (2,149 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair, and those for period of no gage-height record, which are poor. Natural flow of stream affected by water imported from Thompson Creek (Roaring Fork basin), Muddy Creek (Muddy Creek basin), and Buzzard Creek (Plateau Creek basin). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 30.4 ft³/s (0.861 m³/s), 22,020 acre-ft/yr (27.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 790 ft³/s (22.4 m³/s) May 12, 1962, gage height, 5.41 ft (1.649 m), from rating curve extended above 350 ft³/s (9.9 m³/s); maximum gage height, 5.45 ft (1.661 m) May 18, 1970; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 441 ft³/s (12.5 m³/s) at 2100 May 15, gage height, 4.82 ft (1.469 m); only peak above base of 160 ft³/s (4.5 m³/s); no flow Oct. 1-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.26	.30	.40	.30	.80	35	74	242	76	5.5	.20
2	.00	.26	.30	.40	.30	.80	26	75	233	69	5.1	.15
3	.00	.27	.30	.40	.30	1.0	20	92	219	64	4.5	.16
4	.00	.32	.30	.40	.30	1.0	16	93	221	60	3.7	.15
5	.00	.30	.40	.40	.30	1.2	17	80	210	54	3.0	.11
6	.30	.30	.40	.40	.30	1.3	18	70	191	49	2.5	.09
7	.82	.20	.40	.40	.30	1.3	23	64	205	43	2.1	.12
8	.38	.30	.40	.40	.30	1.3	34	59	199	39	1.7	.72
9	.34	.30	.26	.40	.30	1.3	32	62	202	37	1.4	.74
10	.30	.37	.40	.40	.30	1.4	23	85	224	43	2.3	.38
11	.26	.31	.40	.40	.30	1.4	20	107	213	53	2.1	.30
12	.16	.32	.40	.40	.30	1.4	28	115	191	45	1.6	.29
13	.23	.18	.40	.40	.30	1.4	31	140	173	36	1.7	.30
14	.30	.23	.40	.40	.30	1.4	32	205	168	32	2.1	.30
15	.23	.32	.40	.40	.30	1.5	40	311	156	28	2.1	.27
16	.20	.29	.30	.40	.30	1.6	42	344	147	34	1.6	.19
17	.20	.32	.30	.40	.30	1.8	43	299	109	37	1.0	.25
18	.20	.30	.30	.40	.20	2.2	31	207	89	30	.72	1.1
19	.20	.30	.30	.40	.30	2.7	31	168	84	25	.87	1.5
20	.26	.20	.40	.40	.30	3.4	38	221	81	25	.90	1.3
21	.34	.20	.40	.40	.40	4.2	48	233	79	22	.94	1.1
22	.26	.30	.40	.40	.40	4.6	40	260	85	19	1.5	.73
23	.23	.30	.40	.40	.40	4.5	37	278	77	16	1.7	.62
24	.20	.30	.40	.40	.60	4.9	46	299	106	14	1.3	.55
25	.20	.30	.40	.30	.60	5.6	61	275	118	13	1.0	.55
26	.20	.30	.40	.30	.60	5.3	79	257	101	12	.79	.48
27	.20	.30	.40	.30	.60	6.7	107	254	89	10	.49	.45
28	.20	.30	.40	.30	.60	9.5	88	224	83	9.0	.40	.42
29	.20	.30	.40	.30	---	12	80	230	90	8.3	.33	.37
30	.40	.30	.40	.30	---	16	81	245	93	7.5	.23	.36
31	.30	---	.30	.30	---	21	---	248	---	6.0	.20	---
TOTAL	7.11	8.55	11.36	11.70	10.10	124.50	1247	5674	4478	1015.8	55.47	14.25
MEAN	.23	.29	.37	.38	.36	4.02	41.6	183	149	32.8	1.79	.48
MAX	.82	.37	.40	.40	.60	21	107	344	242	76	5.5	1.5
MIN	.00	.18	.26	.30	.20	.80	16	59	77	6.0	.20	.09
AC-FT	14	17	23	23	20	247	2470	11250	8880	2010	110	28

CAL YR 1977 TOTAL 1215.82 MEAN 3.33 MAX 39 MIN .00 AC-FT 2410
WTR YR 1978 TOTAL 12657.84 MEAN 34.7 MAX 344 MIN .00 AC-FT 25110

NOTE.--NO GAGE-HEIGHT RECORD JAN. 17 TO MAR. 7.

09092500 BEAVER CREEK NEAR RIFLE, CO

LOCATION.--Lat 39°28'19", long 107°49'55", in NW¼NE¼ sec.1, T.7 S., R.94 W., Garfield County, Hydrologic Unit 14010005, on left bank 150 ft (46 m) upstream from unnamed tributary, 200 ft (61 m) upstream from road bridge, 4.0 mi (6.4 km) upstream from mouth, and 4.8 mi (7.7 km) southwest of Rifle.

DRAINAGE AREA.--7.90 mi² (20.46 km²).

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder and plank control. Altitude of gage is 6,085 ft (2,038 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 170 acres (688,000 m²) below station and about 380 acres (1.54 km²) in Mann Creek basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 4.47 ft³/s (0.127 m³/s), 3,240 acre-ft/yr (3.99 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85 ft³/s (2.41 m³/s) May 24, 1964, gage height, 4.00 ft (1.219 m), from rating curve extended above 52 ft³/s (1.5 m³/s); minimum daily, 0.24 ft³/s (0.007 m³/s) Dec. 21, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s (1.70 m³/s) at 0100 June 11, gage height, 3.84 ft (1.170 m), only peak above base of 25 ft³/s (0.71 m³/s); minimum daily, 0.32 ft³/s (0.009 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.47	.62	.51	.51	.42	3.6	3.6	24	35	3.1	.89
2	.62	.59	.55	.51	.51	.41	2.1	3.5	29	27	3.0	1.1
3	.51	.60	.63	.51	.51	.42	1.5	3.6	31	23	2.6	1.1
4	.51	.61	.66	.62	.53	.37	1.3	3.7	31	21	2.5	1.0
5	.51	.65	.51	.62	.56	.39	1.4	3.4	36	18	2.4	1.0
6	.72	.81	.37	.62	.52	.44	1.3	3.2	28	17	2.2	1.0
7	1.8	.89	.40	.62	.51	.41	1.6	2.9	31	15	2.0	.97
8	.93	.61	.39	.62	.51	.42	1.9	2.7	35	14	1.9	1.2
9	.72	.32	.44	.62	.51	.40	2.3	2.7	42	13	1.7	1.1
10	.72	.65	.50	.62	.51	.40	1.6	3.1	48	12	1.7	1.0
11	.62	.73	.45	.62	.51	.40	1.4	3.5	46	12	2.2	1.0
12	.40	.65	.53	.62	.63	.40	1.7	3.0	42	11	1.9	1.0
13	.72	.64	.55	.62	.51	.39	1.7	3.9	39	10	1.5	1.0
14	.72	.59	.58	.62	.51	.40	1.6	6.6	41	8.9	1.7	1.0
15	.51	.53	.56	.62	.43	.38	2.0	10	49	7.6	1.9	1.1
16	.51	.54	.63	.63	.40	.45	2.0	14	50	7.5	1.4	1.1
17	.51	.54	.51	.62	.37	.41	1.5	15	40	7.1	1.1	1.4
18	.51	.59	.66	.62	.33	.44	1.3	13	31	6.8	1.1	1.6
19	.51	.51	.57	.62	.58	.46	1.3	15	32	6.0	1.1	1.4
20	.50	.40	.51	.62	.46	.68	1.5	15	35	6.1	1.0	1.2
21	.71	.51	.46	.62	.40	.73	1.8	19	40	6.1	.93	1.2
22	.65	.82	.60	.62	.38	.82	1.5	19	51	5.7	1.1	1.3
23	.55	.68	.54	.62	.37	.82	1.4	27	53	5.5	1.1	1.2
24	.52	.60	.51	.62	.39	.75	1.8	32	57	5.7	1.0	1.2
25	.52	.66	.51	.62	.39	.68	2.2	29	58	4.9	.99	1.0
26	.51	.77	.51	.62	.40	.72	3.1	22	51	4.6	.93	1.0
27	.50	.81	.51	.62	.41	.84	3.9	22	44	4.3	.85	1.0
28	.50	.77	.51	.69	.41	1.0	3.4	21	40	4.0	.87	1.0
29	.51	.65	.51	.62	---	1.1	3.5	23	43	3.8	.82	1.0
30	.83	.60	.51	.62	---	1.2	3.7	30	46	3.5	.81	1.0
31	.63	---	.54	.62	---	1.8	---	30	---	3.1	.72	---
TOTAL	19.60	18.79	16.33	18.97	13.06	18.95	60.9	405.4	1223	329.2	48.12	33.06
MEAN	.63	.63	.53	.61	.47	.61	2.03	13.1	40.8	10.6	1.55	1.10
MAX	1.8	.89	.66	.69	.63	1.8	3.9	32	58	35	3.1	1.6
MIN	.40	.32	.37	.51	.33	.37	1.3	2.7	24	3.1	.72	.89
AC-FT	39	37	32	38	26	38	121	804	2430	653	95	66

CAL YR 1977 TOTAL 344.74 MEAN .94 MAX 4.9 MIN .32 AC-FT 684
WTR YR 1978 TOTAL 2205.38 MEAN 6.04 MAX 58 MIN .32 AC-FT 4370

09092570 COLORADO RIVER AT RULISON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to January 1978 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
14...	1315	1600	1090	8.2	10.0	10.6	15	250	110
NOV									
17...	0930	1300	1380	8.0	5.0	10.4	88	330	160
DEC									
06...	0930	1500	1270	7.2	1.5	10.8	37	290	140
JAN									
18...	1015	1500	1320	7.9	2.5	11.2	41	280	140

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
14...	73	17	150	4.1	4.4	170	0	140	160
NOV									
17...	95	22	180	4.3	5.2	200	0	160	180
DEC									
06...	84	19	150	3.8	4.6	180	0	150	150
JAN									
18...	82	19	160	4.1	4.4	180	0	150	160

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT									
14...	200	.4	7.2	696	.10	.01	.66	.67	.00
NOV									
17...	260	.3	7.5	849	.05	.07	.13	.20	.01
DEC									
06...	210	.1	8.5	715	.11	.04	.16	.20	.00
JAN									
18...	230	.3	9.6	756	.31	.11	.51	.62	.09

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT								
14...	1315	1	70	2	20	.0	0	2.7
JAN								
18...	1015	0	20	2	30	.0	2	1.9

09092830 NORTHWATER CREEK NEAR ANVIL POINTS, CO

LOCATION.--Lat 39°37'13", long 108°00'44", in NE¼NE¼ sec.14, T.5 S., R.95 W., in Garfield County, Hydrologic Unit 14010006, on right bank 50 ft (15 m) downstream from mouth of Bear Gulch, 750 ft (229 m) upstream from mouth, and 8.5 mi (14 km) southwest of Rio Blanco.

DRAINAGE AREA.--12.6 mi² (32.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,420 ft (2,262 m), from topographic map.

REMARKS.--Records poor. No diversions or regulation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120 ft³/s (3.40 m³/s) May 14, 1978, gage height, 2.62 ft (0.799 m); minimum daily, 0.01 ft³/s (0.001 m³/s) Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 120 ft³/s (3.40 m³/s) May 14, gage height, 2.62 ft (0.799 m) from rating curve extended above 31 ft³/s (0.88 m³/s); minimum daily, 0.20 ft³/s (0.006 m³/s) Nov. 3, Mar. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.33	.25	.24	.23	.23	1.1	27	10	2.4	1.5	.81
2	.43	.22	.25	.24	.23	.23	.95	27	9.0	2.3	1.4	.81
3	.43	.20	.25	.24	.23	.23	.80	33	8.5	2.4	1.4	.81
4	.42	.22	.25	.24	.23	.23	.72	36	8.4	2.3	1.4	.86
5	.42	.23	.25	.24	.23	.23	.71	36	8.2	2.3	1.3	.81
6	.47	.26	.25	.24	.23	.23	.83	27	7.8	2.3	1.3	.76
7	.57	.27	.25	.23	.23	.23	1.0	21	7.2	2.3	1.2	.78
8	.49	.28	.25	.23	.23	.23	1.6	19	7.0	2.2	1.2	.81
9	.42	.29	.25	.23	.23	.23	1.6	16	6.5	2.1	1.2	.79
10	.41	.28	.25	.23	.23	.23	1.2	14	6.4	2.0	1.2	.77
11	.42	.27	.25	.23	.23	.23	1.4	19	6.2	1.9	1.2	.85
12	.48	.27	.25	.23	.23	.23	2.2	28	6.0	1.9	1.2	.91
13	.36	.26	.25	.23	.23	.23	2.8	48	5.8	2.0	1.2	.99
14	.37	.25	.25	.23	.23	.23	3.3	75	5.8	1.9	1.1	.97
15	.37	.25	.25	.23	.23	.23	4.6	84	5.6	1.9	1.2	.91
16	.35	.25	.25	.23	.23	.23	5.5	59	5.4	2.0	1.2	.91
17	.34	.25	.25	.23	.23	.22	4.8	51	5.4	2.0	1.1	.98
18	.33	.25	.25	.23	.23	.20	3.8	45	5.4	2.0	1.1	1.1
19	.32	.24	.25	.23	.23	.20	3.1	45	5.0	1.9	1.0	.99
20	.31	.24	.25	.23	.23	.27	3.1	44	4.8	1.9	1.0	.92
21	.32	.25	.25	.23	.23	.32	3.8	44	4.0	1.9	1.0	.90
22	.30	.25	.25	.23	.23	.36	3.7	42	3.3	1.9	1.0	.88
23	.31	.25	.25	.23	.23	.34	3.3	34	3.2	1.9	1.0	.87
24	.27	.25	.25	.23	.23	.33	3.4	26	3.1	1.8	.95	.86
25	.26	.25	.25	.23	.23	.34	4.7	23	2.9	1.7	.91	.82
26	.25	.25	.25	.23	.23	.37	10	18	2.8	1.7	.91	.80
27	.24	.25	.25	.23	.23	.43	30	14	2.8	1.7	.91	.76
28	.23	.25	.25	.23	.23	.56	26	12	2.8	1.6	.91	.77
29	.22	.25	.25	.23	---	.63	24	11	2.7	1.6	.91	.77
30	.25	.25	.25	.23	---	.74	25	11	2.6	1.5	.86	.73
31	.23	---	.25	.23	---	.87	---	10	---	1.5	.81	---
TOTAL	11.03	7.61	7.75	7.19	6.44	9.86	179.01	999	164.6	60.8	34.57	25.70
MEAN	.36	.25	.25	.23	.23	.32	5.97	32.2	5.49	1.96	1.12	.86
MAX	.57	.33	.25	.24	.23	.87	30	84	10	2.4	1.5	1.1
MIN	.22	.20	.25	.23	.23	.20	.71	10	2.6	1.5	.81	.73
AC-FT	22	15	15	14	13	20	355	1980	326	121	69	51

CAL YR 1977 TOTAL 180.50 MEAN .49 MAX 3.1 MIN .01 AC-FT 358
WTR YR 1978 TOTAL 1513.56 MEAN 4.15 MAX 84 MIN .20 AC-FT 3000

NOTE.--NO GAGE-HEIGHT RECORD NOV. 9 TO MAR. 16, JUNE 4 TO JULY 31.

09092830 NORTHWATER CREEK NEAR ANVIL POINTS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
OCT 09...	1330	.42	490	8.1	7.5	--	240	0	56	23	37	1.1
NOV 16...	1300	.31	540	8.1	3.0	--	240	0	57	23	36	1.0
MAR 16...	1500	.32	500	7.9	2.0	11.0	230	0	56	22	33	.9
JUN 21...	1400	3.5	466	7.9	15.0	--	210	0	52	19	30	.9
JUL 13...	1400	2.0	510	8.6	12.0	--	230	0	54	22	32	.9
31...	1315	.72	520	8.1	13.0	--	230	0	58	21	33	.9
SEP 12...	1215	1.0	540	7.2	8.0	--	230	0	57	22	33	.9

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
OCT 09...	.8	330	0	270	38	3.9	.2	16	339	.02	.00	4
NOV 16...	.6	330	0	270	35	2.0	.2	15	334	.12	.04	4
MAR 16...	.6	310	0	250	33	1.7	.2	13	314	--	--	3
JUN 21...	.7	290	0	240	28	1.6	.2	16	292	.12	.03	6
JUL 13...	1.0	290	12	260	29	2.2	.2	17	315	.19	.02	6
31...	1.1	310	0	250	31	2.4	.2	16	318	.30	.02	6
SEP 12...	.7	320	0	260	35	2.0	.2	17	326	.01	.02	5

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 09...	0	70	0	2	40	1	2	8	.0	0	950	10
NOV 16...	600	70	0	1	30	0	2	8	.0	0	990	8
MAR 16...	100	50	1	2	40	1	3	10	.0	1	940	10
JUN 21...	300	50	1	1	20	1	7	0	.0	1	800	5
JUL 13...	200	60	3	3	40	20	5	0	.0	0	960	0
31...	200	70	1	5	20	6	6	10	.0	0	930	10
SEP 12...	300	10	2	1	20	0	5	0	.0	0	960	10

09092830 NORTHWATER CREEK NEAR ANVIL POINTS, CO--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT				
09...	1345	.42	15	.02
NOV				
16...	1240	.25	10	.01
JUL				
31...	1315	.72	21	.04

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°37'15", long 108°01'46" in NW¼NW¼ sec.14, T.5 S., R.95 W., Garfield County, Hydrologic Unit 14010006, on right bank 0.5 mi (0.8 km) upstream from mouth of Corral Gulch, 1.1 mi (1.8 km) downstream from mouth of Northwater Creek, and 9 mi (14 km) southwest of Rio Blanco.

DRAINAGE AREA.--22.1 mi² (57.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,400 ft (2,256 m), from topographic map.

REMARKS.--Records fair. Numerous beaver dams are located upstream. No regulation or diversion above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft³/s (2.92 m³/s) at 1200 May 15, gage height, 3.15 ft (0.960 m); minimum daily, 0.18 ft³/s (0.005 m³/s) on several days in October, December, January, and February.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.27	.30	.24	.20	.27	11	53	16	3.8	2.4	1.1
2	.18	.22	.27	.28	.20	.33	14	50	15	3.5	2.2	1.0
3	.20	.24	.36	.30	.20	.30	12	56	14	3.8	1.9	1.1
4	.20	.24	.36	.30	.20	.30	9.2	54	13	3.6	1.8	1.1
5	.18	.27	.33	.27	.20	.36	7.9	38	13	3.6	1.7	1.0
6	.22	.36	.22	.27	.22	.30	8.3	32	12	3.6	1.7	1.0
7	.53	.39	.22	.24	.22	.24	12	30	11	3.6	1.6	1.1
8	.39	.36	.21	.24	.22	.27	17	28	11	3.4	1.6	1.1
9	.39	.27	.20	.24	.22	.36	20	24	10	3.4	1.7	1.0
10	.33	.22	.20	.27	.27	.36	14	25	9.9	3.1	1.7	.99
11	.30	.22	.22	.24	.24	.36	14	33	9.5	3.0	1.8	1.1
12	.22	.22	.18	.24	.20	.36	17	39	9.3	2.9	1.7	1.1
13	.20	.22	.20	.22	.20	.37	20	48	9.0	3.0	1.7	1.0
14	.22	.22	.20	.24	.20	.38	22	73	8.9	3.0	1.8	.97
15	.22	.22	.22	.24	.18	.38	25	93	8.8	3.0	1.6	.89
16	.22	.22	.24	.24	.22	.39	27	95	8.7	3.1	1.7	.88
17	.22	.22	.27	.24	.20	.42	24	88	8.5	3.2	1.5	.90
18	.22	.22	.27	.24	.18	.49	21	74	8.5	3.1	1.5	1.1
19	.22	.24	.28	.24	.20	.62	19	58	7.9	3.1	1.5	.99
20	.22	.30	.30	.22	.20	.78	19	54	7.5	3.0	1.4	.92
21	.27	.30	.33	.20	.20	1.0	20	56	6.5	3.0	1.3	.89
22	.30	.33	.27	.18	.20	1.9	20	56	5.1	3.0	1.4	.89
23	.30	.36	.27	.18	.20	1.8	19	42	5.0	3.0	1.3	.86
24	.30	.30	.27	.20	.22	1.8	19	35	4.7	2.8	1.2	.82
25	.27	.30	.27	.22	.27	1.3	22	33	4.5	2.8	1.2	.80
26	.27	.30	.27	.22	.27	1.6	34	28	4.5	2.7	1.2	.83
27	.27	.33	.24	.24	.27	2.5	60	25	4.3	2.6	1.2	.80
28	.27	.33	.24	.22	.24	3.3	65	22	4.3	2.6	1.2	.82
29	.27	.30	.24	.20	---	5.1	61	20	4.2	2.5	1.2	.83
30	.33	.33	.24	.20	---	7.9	57	19	4.1	2.5	1.2	.82
31	.36	---	.24	.20	---	10	---	17	---	2.4	1.1	---
TOTAL	8.27	8.32	7.93	7.27	6.04	45.84	710.4	1398	258.7	95.7	48.0	28.70
MEAN	.27	.28	.26	.23	.22	1.48	23.7	45.1	8.62	3.09	1.55	.96
MAX	.53	.39	.36	.30	.27	10	65	95	16	3.8	2.4	1.1
MIN	.18	.22	.18	.18	.18	.24	7.9	17	4.1	2.4	1.1	.80
AC-FT	16	17	16	14	12	91	1410	2770	513	190	95	57

CAL YR 1977 TOTAL 214.15 MEAN .59 MAX 10 MIN .18 AC-FT 425
WTR YR 1978 TOTAL 2623.17 MEAN 7.19 MAX 95 MIN .18 AC-FT 5200

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to current year.
WATER TEMPERATURE: October 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1976. Pumping sediment sampler since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 615 micromhos Dec. 18, 1976; minimum, 262 micromhos Mar. 23, 1977.
WATER TEMPERATURES: Maximum, 24.5°C July 18, Aug. 9, 14, 1977, July 18, 1978; minimum, freezing point on many days during winter months.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,540 mg/L Apr. 27, 1978; minimum daily, 5 mg/L on many days during 1978 water year.
SEDIMENT LOADS: Maximum daily, 247 tons (224 t) Apr. 27, 1978; minimum daily, less than 0.005 ton (0.005 t) estimated, many days during 1978 water year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 603 micromhos Nov. 17; minimum, 301 micromhos Apr. 3.
WATER TEMPERATURES: Maximum, 24.5°C July 18; minimum, freezing point on many days during November to April.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,540 mg/L Apr. 27; minimum daily, 5 mg/L on many days during year.
SEDIMENT LOADS: Maximum daily, 247 tons (224 t) Apr. 27; minimum daily, less than 0.005 ton (0.005 t) estimated, on many days during year.

REVISIONS.--Daily water temperatures for 1977 water year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
OCT												
10...	0930	.34	530	8.2	6.5	--	240	0	58	24	39	1.1
NOV												
16...	1100	.20	520	8.2	3.0	--	250	0	58	24	43	1.2
MAR												
16...	1320	.32	500	7.9	2.5	11.0	220	0	50	24	35	1.0
JUN												
21...	1200	5.5	482	8.0	15.0	--	210	0	52	20	33	1.0
JUL												
13...	1200	3.2	537	8.5	11.5	--	230	0	56	21	34	1.0
31...	1015	2.2	542	8.2	13.0	--	230	0	56	22	36	1.0
SEP												
12...	0950	1.1	552	8.0	8.0	--	230	0	56	22	35	1.0

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
OCT												
10...	1.0	340	0	280	44	2.5	.3	17	355	.08	.02	3
NOV												
16...	.9	350	0	290	38	2.1	.4	16	357	.06	.02	4
MAR												
16...	.7	310	0	250	41	2.0	.3	13	321	.22	.04	3
JUN												
21...	.7	290	0	240	43	2.9	.2	15	312	.19	.02	6
JUL												
13...	1.1	310	0	250	33	2.8	.2	17	320	.18	.02	6
31...	1.1	310	0	250	38	2.9	.2	16	334	1.7	.01	6
SEP												
12...	.9	320	0	260	39	2.2	.2	17	332	.14	.04	5

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT												
10...	100	80	2	2	40	10	2	10	.0	0	880	0
NOV												
16...	500	80	1	4	100	1	4	8	.0	0	930	20
MAR												
16...	100	50	2	3	0	7	7	0	.0	1	780	10
JUN												
21...	200	60	1	3	30	2	9	0	.0	1	780	5
JUL												
13...	200	60	2	3	20	6	5	10	.0	0	920	10
31...	200	100	0	0	20	0	6	10	.0	0	880	10
SEP												
12...	300	50	1	2	30	0	5	0	.0	0	870	20

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	1.5	.0	1.5	.0	.5	.0	1.0	.0
2			3.5	1.5	1.5	.5	1.0	.5	1.0	.0	1.0	.0
3			6.5	1.5	1.5	.0	1.5	.0	.5	.0	1.5	.0
4			4.0	.5	1.5	.0	1.0	.0	.5	.0	1.5	.0
5			3.5	.5	1.5	.0	1.0	.0	1.0	.0	.5	.0
6			3.5	.5	1.5	.0	.0	.0	.5	.0	1.0	.0
7			3.5	.5	1.5	.0	.0	.0	.5	.0	2.0	.0
8			4.0	.5	1.5	.0	.5	.0	.5	.0	2.5	.0
9			4.0	.0	1.5	.0	.0	.0	.5	.0	2.5	.0
10			3.5	.0	1.5	.0	.0	.0	.5	.0	.5	.0
11			4.0	.0	.5	.0	.0	.0	.5	.0	1.0	.0
12			2.5	.0	.5	.0	.0	.0	.5	.0	1.5	.0
13			2.5	.0	.5	.0	.5	.0	1.0	.0	2.0	.0
14			3.0	.5	.5	.0	.5	.0	1.5	.0	1.0	.0
15			3.0	.0	.0	.0	.5	.0	1.0	.0	2.5	.0
16			2.5	.0	.0	.0	1.0	.0	1.5	.0	2.5	.0
17			2.5	.0	.0	.0	1.0	.0	3.0	.0	.0	.0
18			2.5	.0	.0	.0	1.0	.0	2.5	.0	1.5	.0
19			2.5	.0	.0	.0	1.0	.0	2.5	.0	1.5	.0
20			2.5	.0	.0	.0	1.0	.0	2.5	.0	2.5	.0
21			2.0	.0	.0	.0	1.5	.0	1.5	.0	3.0	.0
22			2.0	.0	.0	.0	1.5	.0	1.5	.0	3.5	.0
23			1.5	.0	.5	.0	2.0	.0	1.5	.0	2.5	.0
24			1.5	.0	1.0	.0	.5	.0	2.0	.0	2.0	.0
25			2.0	.0	.0	.0	.0	.0	1.0	.0	1.0	.0
26			1.0	.0	.5	.0	.0	.0	.0	.0	4.0	.0
27			.0	.0	.5	.0	.0	.0	.5	.0	3.5	.0
28			.5	.0	.0	.0	.0	.0	1.0	.0	.5	.0
29			2.0	.0	.0	.0	.0	.0	---	---	1.0	.0
30			2.0	.5	.5	.0	.0	.0	---	---	2.0	.0
31			---	---	1.0	.0	.0	.0	---	---	2.5	.0

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.5	.0	10.0	3.5	20.0	6.0	22.5	8.5	23.5	8.5	21.5	10.0
2	2.5	.0	14.0	2.0	18.5	7.0	23.0	10.5	23.0	8.0	22.0	9.5
3	3.0	.0	8.5	2.5	20.0	7.0	22.5	10.0	22.0	9.0	21.0	10.0
4	4.5	.0	8.5	3.5	19.0	7.5	16.0	11.0	21.5	10.0	21.5	10.0
5	5.0	.0	13.0	1.5	19.0	8.0	19.5	10.0	22.0	11.5	23.5	9.5
6	5.0	.0	15.0	3.5	---	---	22.0	9.5	23.5	11.0	23.0	9.0
7	4.0	.0	15.0	.0	---	---	22.5	9.0	23.5	10.0	22.5	9.5
8	5.0	.0	15.0	.0	---	---	21.0	8.5	21.0	10.5	21.0	10.0
9	5.5	.0	14.0	.0	---	---	22.5	10.0	24.5	9.0	19.0	8.5
10	6.5	.0	11.0	.0	---	---	22.0	8.5	21.5	8.0	20.5	9.5
11	4.0	.0	13.5	.0	---	---	22.5	8.0	21.0	9.0	14.0	11.5
12	5.0	.0	11.5	.0	---	---	23.5	8.5	22.0	8.5	15.5	10.0
13	6.5	.0	11.5	4.0	---	---	21.5	10.0	22.5	8.5	15.5	8.0
14	8.0	.0	7.5	.0	---	---	23.5	9.5	24.5	9.0	18.0	8.0
15	4.0	.5	13.0	4.0	---	---	24.0	9.5	22.0	10.5	17.5	10.0
16	8.0	1.0	14.5	.0	---	---	21.0	9.5	20.5	11.5	17.0	8.5
17	10.0	2.0	14.0	7.0	---	---	23.5	9.5	17.0	12.5	15.0	8.0
18	10.5	1.0	13.5	3.5	---	---	24.5	10.0	19.5	11.5	16.5	6.5
19	2.5	1.5	14.5	2.0	---	---	19.5	11.5	17.5	10.5	15.0	7.0
20	8.5	.5	10.0	3.5	---	---	22.0	11.0	18.0	11.0	17.0	8.0
21	10.5	.0	13.0	2.0	---	---	19.0	11.5	20.0	11.0	14.0	8.0
22	11.5	.0	15.5	2.5	---	---	21.0	12.0	21.0	11.0	16.0	6.0
23	11.5	1.0	14.0	4.0	---	---	18.0	11.5	20.5	11.5	13.0	6.5
24	13.0	1.5	11.5	5.0	---	---	18.5	12.5	19.5	11.5	14.0	5.5
25	8.5	1.5	11.0	5.5	---	---	22.0	12.5	21.5	12.0	15.0	6.5
26	10.0	1.5	13.0	5.0	---	---	22.0	10.5	20.0	11.5	15.0	8.0
27	11.5	2.0	12.5	3.5	---	---	19.5	10.5	17.0	10.0	15.0	6.5
28	9.0	2.5	13.5	5.5	---	---	21.5	10.0	16.5	9.5	17.0	7.5
29	12.5	3.0	18.0	5.0	21.5	10.5	22.5	9.5	20.0	9.0	13.5	7.5
30	14.5	2.5	18.0	5.5	22.5	8.0	23.0	10.0	21.0	10.0	12.0	6.0
31	---	---	19.5	5.5	---	---	23.5	8.5	20.5	10.0	---	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563	---	559	487	483	512	380	---	403	544	566	570
2	562	---	553	482	483	502	---	418	413	544	564	571
3	563	---	552	477	489	508	---	415	422	544	565	569
4	567	---	551	474	493	508	---	414	---	---	565	569
5	568	---	550	471	493	507	413	416	---	---	566	569
6	555	---	547	467	489	509	---	425	---	---	565	568
7	537	---	550	469	490	513	443	427	---	---	566	569
8	555	---	540	468	487	514	415	425	---	---	569	568
9	560	---	546	461	487	509	408	422	---	---	566	570
10	---	---	547	461	490	507	426	---	---	---	568	569
11	---	---	543	464	491	500	432	432	---	---	568	559
12	---	---	534	464	495	510	414	421	---	---	569	564
13	---	---	523	470	485	506	397	410	---	560	567	565
14	---	---	518	467	494	505	---	---	---	557	557	568
15	---	---	512	463	484	494	---	---	---	557	561	570
16	---	596	507	467	497	522	384	---	---	551	564	581
17	---	601	520	467	513	519	384	---	---	572	568	577
18	---	597	515	467	514	519	380	---	---	574	569	562
19	---	584	516	455	517	517	370	---	---	567	567	563
20	---	579	517	470	506	497	---	---	---	562	570	562
21	---	582	513	473	502	494	354	---	542	565	570	562
22	---	578	510	476	509	---	356	---	544	564	568	567
23	---	576	507	474	511	476	360	378	537	566	569	568
24	---	575	503	477	513	479	358	380	541	---	568	570
25	---	572	500	479	515	484	333	386	543	---	571	568
26	---	569	492	479	513	471	---	380	543	---	569	566
27	---	565	488	478	512	---	---	367	546	---	568	565
28	---	559	489	482	513	---	398	369	544	---	568	565
29	---	559	489	482	---	448	408	374	540	---	568	564
30	---	556	489	483	---	446	409	384	543	---	567	565
31	---	---	488	485	---	---	---	390	---	567	570	---

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	3.5	---	---	2.5	-0.5	.0	-0.5	3.0	-0.5	3.0	.5
2	13.5	4.0	---	---	4.5	1.5	1.0	-0.5	1.0	-0.5	4.5	-0.5
3	15.0	5.5	---	---	5.5	2.5	2.0	.5	2.0	-0.5	2.5	.0
4	14.0	6.5	---	---	4.5	2.0	2.0	1.0	1.5	-0.5	4.0	.0
5	14.5	8.5	---	---	1.5	-0.5	2.0	1.0	2.5	-0.5	3.0	.5
6	13.5	8.0	---	---	3.5	-0.5	2.0	.0	2.5	.5	3.0	.0
7	10.0	7.5	---	---	4.0	-0.5	1.0	-0.5	3.5	.5	5.0	-0.5
8	10.5	5.0	---	---	1.5	-0.5	1.0	-0.5	2.5	-0.5	4.5	.0
9	10.0	4.5	---	---	3.0	-0.5	2.0	.0	1.5	-0.5	4.0	.0
10	---	---	---	---	3.0	.0	2.5	1.0	3.5	.5	3.5	.0
11	---	---	---	---	3.0	-0.5	3.0	.5	2.5	-0.5	4.5	.0
12	---	---	---	---	3.5	-0.5	3.5	-0.5	3.0	-0.5	3.0	.0
13	---	---	---	---	2.0	-0.5	.5	-0.5	2.5	-0.5	4.0	.0
14	---	---	---	---	2.5	1.0	2.0	-0.5	2.0	-0.5	2.5	.0
15	---	---	---	---	3.5	-0.5	2.0	.0	1.5	-0.5	2.5	.0
16	---	---	5.0	1.5	2.0	-0.5	2.0	.0	1.0	-0.5	2.5	.0
17	---	---	5.5	1.0	2.5	-0.5	3.0	.5	.0	.0	4.0	.0
18	---	---	5.5	3.0	2.0	.0	3.0	-0.5	.0	-0.5	4.0	.0
19	---	---	3.5	-0.5	1.5	-0.5	2.5	-0.5	1.0	.0	3.0	.0
20	---	---	1.5	-0.5	.0	-0.5	2.5	.5	1.5	.0	4.5	.0
21	---	---	4.5	-0.5	1.0	-0.5	3.0	-0.5	1.5	.0	4.0	.0
22	---	---	5.0	1.0	1.5	.0	2.5	.0	2.0	-0.5	1.5	.0
23	---	---	4.5	1.0	2.0	.0	2.5	-0.5	2.0	-0.5	5.0	.0
24	---	---	4.5	1.0	2.0	.0	.5	-0.5	2.0	-0.5	4.0	.0
25	---	---	5.5	2.0	1.5	-0.5	.5	-0.5	2.0	.0	3.5	.0
26	---	---	6.0	1.5	1.5	-0.5	1.5	.0	3.0	.5	5.0	.0
27	---	---	3.5	1.0	2.0	.0	1.0	-0.5	2.5	-0.5	5.5	.0
28	---	---	3.5	.5	3.5	.5	.5	-0.5	3.0	-0.5	6.0	.5
29	---	---	4.0	-0.5	3.0	1.0	2.0	.0	---	---	7.0	.0
30	---	---	3.0	-0.5	3.5	-0.5	1.5	-0.5	---	---	7.0	.5
31	---	---	---	---	1.0	-0.5	2.0	-0.5	---	---	7.0	1.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.0	1.0	9.0	2.5	16.0	3.5	23.0	9.0	19.5	10.5	19.0	9.0
2	2.5	.0	11.5	2.5	14.0	5.0	22.5	8.0	21.0	10.0	18.0	9.0
3	5.0	.5	9.5	3.5	15.0	5.5	21.5	8.0	22.5	10.0	20.0	9.5
4	8.5	.5	8.0	3.0	13.5	7.0	22.0	7.5	22.0	9.0	19.5	9.5
5	7.0	1.0	6.0	2.5	12.5	6.0	---	---	22.0	8.5	20.0	10.0
6	9.0	1.5	9.0	2.0	18.5	4.5	---	---	21.0	9.0	20.0	10.0
7	9.0	2.0	8.0	2.0	14.5	6.0	---	---	22.5	10.5	19.5	11.0
8	9.5	2.5	8.5	2.5	17.0	5.5	---	---	21.0	10.0	17.5	9.5
9	5.5	1.0	13.0	1.0	19.5	6.0	---	---	20.0	11.0	17.5	9.0
10	8.5	.0	14.0	3.0	19.0	7.5	---	---	20.5	11.0	17.0	9.5
11	10.5	1.0	10.5	3.5	20.0	7.0	---	---	21.5	11.0	16.5	9.5
12	10.0	1.5	13.0	2.5	18.0	5.5	---	---	19.5	11.5	14.0	7.0
13	8.0	2.0	14.5	2.5	20.5	6.5	24.0	13.0	17.0	11.5	14.0	5.5
14	9.0	3.0	14.5	3.5	19.0	6.5	24.5	13.5	14.5	10.0	14.0	5.5
15	9.0	3.0	14.0	4.0	21.0	7.0	21.5	11.0	19.5	7.0	16.0	8.0
16	7.5	2.5	14.0	4.5	20.0	6.0	23.0	11.0	20.0	8.0	16.5	8.0
17	5.5	1.0	8.0	4.0	20.0	6.0	22.0	12.5	20.0	8.5	14.5	10.0
18	10.0	-0.5	12.0	2.0	18.5	5.5	24.5	11.0	18.0	8.5	10.0	7.5
19	10.5	.5	14.5	2.0	19.5	8.0	23.5	12.0	18.5	6.5	11.0	6.0
20	11.5	1.0	13.5	3.5	21.0	6.0	23.0	11.0	19.0	8.5	10.5	5.0
21	6.0	2.0	10.0	6.0	22.0	7.5	19.5	10.5	20.0	10.0	11.5	3.5
22	8.5	.0	14.0	4.0	22.0	8.0	23.0	8.5	18.5	12.0	13.0	5.0
23	11.0	1.5	14.0	3.5	22.5	8.5	23.0	9.0	20.0	10.0	14.0	6.0
24	11.0	.5	14.0	4.0	23.0	10.0	---	---	20.5	9.0	12.0	7.0
25	10.5	3.0	12.0	3.5	22.0	10.0	---	---	18.0	9.5	14.0	7.0
26	11.0	3.0	14.5	3.0	21.0	7.0	---	---	20.0	9.0	13.5	6.5
27	7.0	3.5	11.0	5.0	20.0	8.5	---	---	19.5	7.5	13.5	6.5
28	8.0	3.0	14.0	4.0	18.0	10.5	---	---	19.5	8.0	14.0	7.0
29	9.5	2.5	16.0	4.0	18.5	9.5	---	---	19.5	8.5	13.5	7.0
30	9.5	3.5	13.5	6.0	22.5	9.0	---	---	19.0	8.0	12.5	5.5
31	---	---	12.0	5.0	---	---	20.0	10.5	18.5	9.0	---	---

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.18	---	.00	.27	---	.01	.30		.01
2	.13	---	.00	.22	---	.01	.27		.01
3	.20	---	.01	.24	---	.01	.36		.01
4	.20	---	.01	.24	---	.01	.36		.01
5	.18	---	.00	.27	---	.01	.33		.01
6	.22	---	.01	.36	---	.01	.22		.01
7	.53	---	.01	.39	---	.01	.22		.01
8	.39	---	.01	.36	---	.01	.21		.01
9	.39	---	.01	.27	---	.01	.20		.01
10	.33	5	.00	.22	---	.01	.20		.01
11	.30	---	.01	.22	---	.01	.22		.01
12	.22	---	.01	.22	---	.01	.18		.00
13	.20	---	.01	.22	---	.01	.20		.01
14	.22	---	.01	.22	---	.01	.20		.01
15	.22	---	.01	.22	---	.01	.22		.10
16	.22	---	.01	.22	7	.00	.24		.01
17	.22	---	.01	.22	---	.01	.27		.01
18	.22	---	.01	.22	---	.01	.27		.01
19	.22	---	.01	.24	---	.01	.28		.01
20	.22	---	.01	.30	---	.01	.30		.01
21	.27	---	.01	.30	---	.01	.33		.01
22	.30	---	.01	.33	---	.01	.27		.00
23	.30	---	.01	.36	---	.01	.27		.00
24	.30	---	.01	.30	---	.01	.27		.00
25	.27	---	.01	.30	---	.01	.27		.00
26	.27	---	.01	.30	---	.01	.27		.00
27	.27	---	.01	.33	---	.01	.24		.00
28	.27	---	.01	.33	---	.01	.24		.00
29	.27	---	.01	.30	---	.01	.24		.00
30	.33	---	.01	.33	---	.01	.24		.00
31	.36	---	.01	---	---	---	.24		.00
TOTAL	8.27	---	0.27	8.32	---	0.29	7.93		0.29

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09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	.24		.00	.20		.00	.27		.00
2	.28		.00	.20		.00	.33		.00
3	.30		.00	.20		.00	.30		.00
4	.30		.00	.20		.00	.30		.00
5	.27		.00	.20		.00	.36		.00
6	.27		.00	.22		.00	.30		.00
7	.24		.00	.22		.00	.24		.00
8	.24		.00	.22		.00	.27		.00
9	.24		.00	.22		.00	.36		.00
10	.27		.00	.27		.00	.36		.00
11	.24		.00	.24		.00	.36		.00
12	.24		.00	.20		.00	.36		.00
13	.22		.00	.20		.00	.37		.00
14	.24		.00	.20		.00	.38		.00
15	.24		.00	.18		.00	.38		.00
16	.24		.00	.22		.00	.39		.00
17	.24		.00	.20		.00	.42		.00
18	.24		.00	.18		.00	.49		.01
19	.24		.00	.20		.00	.62		.02
20	.22		.00	.20		.00	.78		.04
21	.20		.00	.20		.00	1.0		.08
22	.18		.00	.20		.00	1.9		.18
23	.18		.00	.20		.00	1.8		.14
24	.20		.00	.22		.00	1.8		.17
25	.22		.00	.27		.00	1.3		.10
26	.22		.00	.27		.00	1.6		.17
27	.24		.00	.27		.00	2.5		.34
28	.22		.00	.24		.00	3.3		.58
29	.20		.00	---			5.1		1.1
30	.20		.00	---			7.9		2.8
31	.20		.00	---			10		5.9
TOTAL	7.27		0.00	6.04		0.00	45.84		11.63

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	11	---	5.9	53	---	61	16	---	1.9
2	14	---	8.3	50	329	44	15	---	1.8
3	12	---	6.5	56	282	43	14	---	1.7
4	9.2	---	4.0	54	340	50	13	---	1.6
5	7.9	---	2.6	38	246	26	13	47	1.6
6	8.3	---	3.6	32	320	29	12	---	1.0
7	12	---	7.1	30	279	23	11	---	1.0
8	17	---	11	28	253	20	11	---	1.0
9	20	---	12	24	183	12	10	---	.80
10	14	140	5.3	25	---	22	9.9	---	.70
11	14	190	7.2	33	---	39	9.5	---	.80
12	17	210	9.6	39	---	60	9.3	---	.90
13	20	270	15	48	---	88	9.0	---	.80
14	22	300	18	73	---	170	8.9	---	.70
15	25	960	65	93	---	240	8.8	---	.70
16	27	1650	120	95	---	230	8.7	---	.60
17	24	615	40	88	---	150	8.5	---	.60
18	21	---	29	74	---	96	8.5	---	.60
19	19	---	26	58	---	60	7.9	---	.40
20	19	---	22	54	---	44	7.5	---	.40
21	20	---	25	56	---	41	6.5	11	.30
22	20	---	24	56	---	32	5.1	---	.30
23	19	---	22	42	159	18	5.0	---	.30
24	19	---	27	35	151	14	4.7	---	.30
25	22	---	50	33	113	10	4.5	---	.30
26	34	---	120	28	105	7.9	4.5	---	.30
27	60	1540	247	25	84	5.7	4.3	---	.30
28	65	1400	237	22	68	4.0	4.3	---	.40
29	61	973	157	20	64	3.4	4.2	---	.30
30	57	---	92	19	49	2.5	4.1	---	.20
31	---	---	---	17	46	2.1	---	---	---
TOTAL	710.4	---	1418.9	1398	---	1647.6	258.7	---	22.60

09092850 EAST MIDDLE FORK PARACHUTE CREEK NEAR RIO BLANCO, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	3.3	---	.20	2.4	---	.30	1.1	46	.14
2	3.5	---	.20	2.2	27	.16	1.0	20	.05
3	3.5	---	.20	1.9	15	.08	1.1	24	.07
4	3.6	---	.20	1.8	23	.11	1.1	74	.22
5	3.6	---	.20	1.7	18	.08	1.0	64	.17
6	3.6	---	.20	1.7	23	.11	1.0	44	.12
7	3.6	---	.20	1.6	17	.07	1.1	14	.04
8	3.4	---	.20	1.6	15	.06	1.1	16	.05
9	3.4	---	.20	1.7	15	.07	1.0	12	.03
10	3.1	---	.20	1.7	13	.06	.99	14	.04
11	3.0	---	.20	1.8	18	.09	1.1	18	.05
12	2.9	---	.20	1.7	17	.08	1.1	20	.06
13	3.0	36	.29	1.7	---	.08	1.0	24	.06
14	3.0	37	.30	1.8	---	.09	.97	46	.12
15	3.0	27	.22	1.6	---	.08	.89	48	.12
16	3.1	24	.20	1.7	19	.09	.88	28	.07
17	3.2	25	.22	1.5	21	.09	.90	42	.10
18	3.1	23	.19	1.5	19	.08	1.1	28	.08
19	3.1	19	.16	1.5	18	.07	.99	28	.07
20	3.0	45	.36	1.4	15	.06	.92	32	.06
21	3.0	29	.23	1.3	15	.05	.89	48	.12
22	3.0	39	.32	1.4	12	.05	.89	32	.08
23	3.0	30	.24	1.3	9	.03	.86	16	.04
24	2.8	31	.23	1.2	6	.02	.82	22	.05
25	2.8	27	.20	1.2	15	.05	.80	30	.06
26	2.7	29	.21	1.2	27	.09	.83	30	.07
27	2.6	30	.21	1.2	24	.08	.80	28	.06
28	2.6	25	.18	1.2	18	.06	.82	20	.04
29	2.5	42	.28	1.2	13	.04	.83	16	.04
30	2.5	31	.21	1.2	13	.04	.82	16	.04
31	2.4	27	.17	1.1	18	.05	---	---	---
TOTAL	95.7	---	6.82	48.0	---	2.47	28.70	---	2.34
YEAR	2623.17		3113.21						

09092960 EAST FORK PARACHUTE CREEK NEAR ANVIL POINTS, CO

LOCATION.--Lat 39°33'18", long 107°58'56", in SW¼NE¼ sec.3, T.6 S., R.95 W., Garfield County, Hydrologic Unit 14010006, on right bank 700 ft (213 m) downstream from first Anvil Creek and 4.2 mi (6.8 km) northwest of Anvil Points.

DRAINAGE AREA.--14.5 mi² (37.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to September 1977.

GAGE.--Water-stage recorder. Altitude of gage is 7,860 ft (2,396 m), from topographic map.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are fair. No diversions or regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft³/s (3.68 m³/s) at 0600 May 15, gage height, 2.94 ft (0.896 m); minimum daily, 0.17 ft³/s (0.005 m³/s) Sept. 7, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.44	.40	.36	.38	.44	2.8	36	24	3.2	1.6	1.3
2	.29	.40	.40	.30	.38	.50	3.3	37	20	2.8	1.7	1.3
3	.29	.37	.40	.38	.38	.50	3.1	42	19	2.7	1.5	.52
4	.29	.41	.40	.38	.38	.50	3.1	45	19	2.6	1.3	.72
5	.29	.42	.40	.38	.38	.50	3.3	42	19	2.6	1.2	.72
6	.44	.43	.38	.38	.38	.50	3.3	36	17	2.8	1.2	.26
7	.85	.50	.38	.38	.38	.50	4.4	33	18	2.6	1.2	.17
8	.53	.49	.38	.38	.38	.50	5.6	29	16	2.4	1.2	.39
9	.42	.46	.38	.38	.38	.50	6.2	27	15	2.6	1.3	.26
10	.38	.46	.38	.38	.38	.60	4.1	26	14	2.6	1.4	.21
11	.36	.46	.38	.38	.38	.60	3.8	29	13	2.5	1.3	1.1
12	.33	.46	.38	.38	.38	.60	4.7	36	12	2.6	1.2	1.2
13	.33	.46	.38	.38	.38	.60	10	50	10	2.4	1.5	.72
14	.33	.46	.38	.38	.38	.60	13	80	9.4	2.2	2.0	.43
15	.33	.46	.38	.38	.38	.60	15	119	7.8	2.2	1.7	.30
16	.33	.46	.38	.38	.38	.60	16	113	7.3	2.4	1.4	.17
17	.33	.46	.38	.38	.36	.60	13	106	6.9	2.4	1.3	.21
18	.33	.46	.38	.38	.34	.70	11	84	6.5	2.2	1.3	.72
19	.33	.46	.38	.38	.36	.70	10	65	6.0	2.0	1.2	.72
20	.35	.46	.38	.38	.36	.70	11	62	6.4	2.0	1.3	1.1
21	.41	.40	.30	.38	.36	.70	14	64	5.6	1.7	1.3	1.0
22	.42	.40	.36	.38	.36	.70	13	64	5.0	1.8	1.5	1.0
23	.40	.40	.38	.38	.36	.73	11	64	4.1	1.7	1.3	1.2
24	.37	.40	.38	.38	.38	.80	14	53	4.1	1.6	1.3	1.2
25	.37	.40	.38	.38	.40	.80	19	50	3.7	1.7	1.3	1.2
26	.37	.40	.38	.38	.40	.90	27	43	3.8	1.7	1.3	1.2
27	.37	.40	.38	.36	.40	.90	37	36	3.6	1.4	1.2	1.3
28	.37	.40	.38	.34	.42	1.0	34	32	3.8	1.4	1.2	1.7
29	.38	.40	.38	.36	---	1.2	33	32	3.8	1.5	1.3	1.7
30	.46	.40	.38	.38	---	1.6	35	29	4.1	1.6	1.3	1.5
31	.50	---	.38	.38	---	2.0	---	27	---	1.4	1.3	---
TOTAL	11.84	12.98	11.78	11.60	10.58	22.67	383.7	1591	307.9	67.3	42.1	25.52
MEAN	.38	.43	.38	.37	.38	.73	12.8	51.3	10.3	2.17	1.36	.85
MAX	.85	.50	.40	.38	.42	2.0	37	119	24	3.2	2.0	1.7
MIN	.29	.37	.30	.30	.34	.44	2.8	26	3.6	1.4	1.2	.17
AC-FT	23	26	23	23	21	45	761	3160	611	133	84	51

CAL YR 1977 TOTAL 205.42 MEAN .56 MAX 1.9 MIN .07 AC-FT 407
WTR YR 1978 TOTAL 2498.97 MEAN 6.85 MAX 119 MIN .17 AC-FT 4960

NOTE.--NO GAGE-HEIGHT RECORD FEB. 17 TO APR. 13.

09092960 EAST FORK PARACHUTE CREEK NEAR ANVIL POINTS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT 20...	1330	.38	510	8.2	6.5	10.0	280	0	67	26	25	.7
DEC 19...	1400	.40	435	8.1	1.0	10.2	280	3	68	27	23	.6
MAY 03...	1230	40	410	7.1	7.0	--	190	0	48	18	18	.6
JUN 22...	1415	5.7	460	8.0	18.0	8.4	230	0	56	21	19	.6
JUL 13...	1300	2.6	480	7.8	17.0	6.3	250	0	60	23	20	.6
AUG 28...	1200	1.2	500	7.8	11.5	8.2	240	0	60	22	25	.7

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 20...	.8	350	0	290	28	1.6	.2	15	337	.05	.02	4
DEC 19...	.6	340	0	280	34	1.7	.2	15	339	.25	.15	0
MAY 03...	.7	250	0	210	21	1.8	.2	16	255	1.6	.00	3
JUN 22...	.7	280	0	230	22	1.4	.2	15	275	.34	.02	4
JUL 13...	.8	300	0	250	20	1.4	.2	16	292	.32	.02	5
AUG 28...	.8	320	0	260	22	1.5	.2	16	307	.10	.03	3

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 20...	100	70	0	1	20	1	0	0	.0	0	680	10
DEC 19...	100	60	0	3	20	1	10	0	.0	1	680	20
MAY 03...	0	40	0	2	40	2	0	10	.0	1	560	10
JUN 22...	0	40	0	2	20	7	0	0	.0	0	600	20
JUL 13...	200	50	2	2	20	1	0	0	.0	1	760	10
AUG 28...	300	50	1	2	10	7	0	10	.0	1	800	10

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO

LOCATION.--Lat 39°34'03", long 108°01'14", in SE¼NW¼ sec.35, T.5 S., R.95 W., Garfield County, Hydrologic Unit 14010006, on right bank 0.3 mi (0.9 km) below East Fork Falls and 6.4 mi (10.3 km) northwest of Rulison.

DRAINAGE AREA.--20.4 mi² (52.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,880 ft (2,100 m), from topographic map.

REMARKS.--Records good. No gage-height record Apr. 16, 17, and May 16, 17. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 121 ft³/s (3.42 m³/s) May 17, gage height, 3.49 ft (1.064 m); no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121 ft³/s (3.42 m³/s) at 1330 May 17, gage height, 3.49 ft (1.064 m), only peak above base of 100 ft³/s (3.43 m³/s); no flow part of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	16	47	22	4.2	1.7	.63
2	.00	.00	.00	.00	.00	.00	11	47	20	4.2	1.8	.63
3	.00	.00	.00	.00	.00	.00	9.0	57	18	4.0	1.5	.63
4	.00	.00	.00	.00	.00	.00	8.7	62	17	3.8	1.4	.60
5	.00	.00	.00	.00	.00	.00	9.2	51	18	3.5	1.3	.60
6	.00	.00	.00	.00	.00	.00	9.5	45	15	3.2	1.2	.60
7	.00	.00	.00	.00	.00	.00	10	42	14	3.2	1.2	.60
8	.00	.00	.00	.00	.00	.00	12	34	13	2.8	1.2	.74
9	.00	.00	.00	.00	.00	.00	13	32	12	2.8	1.2	.65
10	.00	.00	.00	.00	.00	.00	11	33	11	2.5	1.3	.60
11	.00	.00	.00	.00	.00	.00	12	35	10	2.8	1.4	.82
12	.00	.00	.00	.00	.00	.00	14	43	9.8	2.8	1.3	.82
13	.00	.00	.00	.00	.00	.00	16	58	9.2	2.3	1.5	.82
14	.00	.00	.00	.00	.00	.00	18	76	8.8	2.3	1.8	.82
15	.00	.00	.00	.00	.00	.00	18	79	8.5	2.4	1.8	.74
16	.00	.00	.00	.00	.00	.00	14	99	8.2	2.5	1.2	.74
17	.00	.00	.00	.00	.00	.00	12	107	8.0	2.4	1.2	.91
18	.00	.00	.00	.00	.00	.00	13	83	7.2	2.2	1.2	1.7
19	.00	.00	.00	.00	.00	.00	13	69	7.2	2.1	1.1	1.5
20	.00	.00	.00	.00	.00	.00	15	63	7.0	2.1	.99	1.3
21	.00	.00	.00	.00	.00	.00	16	62	6.8	2.0	1.1	1.2
22	.00	.00	.00	.00	.00	.00	14	60	6.2	1.9	1.2	.99
23	.00	.00	.00	.00	.00	.00	14	59	6.0	1.9	1.2	.91
24	.00	.00	.00	.00	.00	.00	17	58	5.8	1.9	.91	.82
25	.00	.00	.00	.00	.00	.00	18	42	5.2	2.0	.91	.74
26	.00	.00	.00	.00	.00	3.6	30	36	5.0	2.0	.91	.74
27	.00	.00	.00	.00	.00	11	41	33	4.8	2.0	.82	.74
28	.00	.00	.00	.00	.00	9.5	43	31	4.8	1.7	.82	.74
29	.00	.00	.00	.00	---	11	42	28	5.0	1.8	.82	.74
30	.00	.00	.00	.00	---	13	42	26	5.2	1.8	.55	.74
31	.00	---	.00	.00	---	16	---	24	---	1.7	.74	---
TOTAL	.00	.00	.00	.00	.00	64.10	531.4	1621	298.7	78.8	37.37	24.81
MEAN	.000	.000	.000	.000	.000	2.07	17.7	52.3	9.96	2.54	1.21	.83
MAX	.00	.00	.00	.00	.00	16	43	107	22	4.2	1.8	1.7
MIN	.00	.00	.00	.00	.00	.00	8.7	24	4.8	1.7	.55	.60
AC-FT	.00	.00	.00	.00	.00	127	1050	3220	592	156	74	49

CAL YR 1977 TOTAL 20.13 MEAN .055 MAX 1.9 MIN .00 AC-FT 40
WTR YR 1978 TOTAL 2656.18 MEAN 7.28 MAX 107 MIN .00 AC-FT 5270

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to current year.
WATER TEMPERATURE: October 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 580 micromhos May 3, 1977; minimum, 180 micromhos Aug. 25, 1977.
WATER TEMPERATURES: Maximum, 15.5°C July 16, 17, 1978; minimum, 0.0°C several days during year.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,680 mg/L May 17, 1978; minimum daily, 6 mg/L Sept. 1, 1978.
SEDIMENT LOADS: Maximum daily, 485 tons (440 t) May 17, 1978; minimum daily, 0.01 ton (0.01 t) on many days during 1978 water year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 500 micromhos June 15; minimum, 210 micromhos May 3.
WATER TEMPERATURES: Maximum, 15.5°C July 16, 17; minimum, not determined.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,680 mg/L May 17; minimum daily, 6 mg/L Sept. 1.
SEDIMENT LOADS: Maximum daily, 485 tons (440 t) May 17; minimum daily, 0.01 ton (0.01 t) on many days during period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO
APR 19...	1245	14	430	7.8	4.5	9.4	210	0	51	20	20	.6
MAY 11...	1230	29	425	7.7	7.5	8.8	210	0	53	19	18	.5
JUN 28...	1200	5.0	450	8.0	12.0	9.7	220	19	53	22	21	.6
JUL 12...	1230	3.2	465	7.8	13.5	7.6	230	7	55	22	23	.7
AUG 30...	1145	.65	480	7.7	9.0	8.6	230	18	56	22	25	.7

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)
APR 19...	.6	260	0	210	26	1.8	.1	13	267	1.3	.02	3
MAY 11...	.6	270	0	220	22	1.6	.1	15	270	1.5	.04	3
JUN 28...	.8	250	0	205	25	1.5	.2	11	259	.12	.01	5
JUL 12...	.9	270	0	220	29	1.4	.2	16	284	.44	.02	5
AUG 30...	.9	260	0	210	29	2.5	.2	16	281	.02	.02	4

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
APR 19...	100	40	0	2	70	0	6	0	.0	1	660	10
MAY 11...	200	40	1	1	100	5	2	10	.0	0	580	0
JUN 28...	100	50	2	2	20	6	4	0	.0	0	690	10
JUL 12...	100	60	3	2	30	4	10	0	.0	0	760	20
AUG 30...	300	70	2	3	20	8	2	0	.0	0	710	10

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	403	396	385	440	470	460
2						---	419	356	390	440	472	460
3						---	425	384	390	445	472	455
4						---	431	414	395	445	472	460
5						---	429	429	400	450	474	460
6						---	427	444	400	460	476	450
7						---	425	427	395	460	470	460
8						---	429	423	395	466	469	470
9						---	326	400	400	462	474	480
10						---	316	363	400	462	474	460
11						---	342	378	410	459	471	480
12						---	355	370	410	465	469	470
13						---	365	368	413	471	466	470
14						---	411	402	433	471	469	480
15						---	410	407	456	470	470	480
16						---	393	417	450	468	474	490
17						---	394	395	440	469	472	490
18						---	392	387	430	469	472	480
19						---	437	413	420	469	468	485
20						---	444	404	421	467	464	490
21						---	441	408	435	468	462	495
22						---	447	427	447	467	470	490
23						---	437	444	453	467	468	485
24						---	430	443	456	467	470	480
25						---	419	430	454	468	465	480
26						456	408	438	457	469	460	490
27						454	401	463	459	469	465	490
28						432	398	465	412	467	470	490
29						429	398	465	420	466	475	490
30						424	399	470	430	467	480	490
31						421	---	475	---	466	479	---

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	14.0	7.0	---	---	12.0	7.5		
2			---	---	12.5	7.5	---	---	11.5	7.0		
3			---	---	---	---	---	---	11.5	5.5		
4			---	---	---	---	---	---	11.0	5.5		
5			---	---	---	---	---	---	11.0	11.0		
6			---	---	---	---	---	---	11.0	5.0		
7			---	---	---	---	---	---	12.0	7.0		
8			---	---	---	---	---	---	12.5	6.5		
9			---	---	---	---	---	---	11.5	8.0		
10			---	---	---	---	---	---	11.0	7.0		
11			---	---	---	---	---	---	12.0	7.0		
12			---	---	---	---	14.5	7.0	11.0	7.5		
13			---	---	---	---	14.0	6.5	10.5	8.0		
14			---	---	---	---	13.5	7.0	8.5	6.5		
15			---	---	---	---	14.5	8.0	9.0	9.0		
16			---	---	---	---	15.5	10.5	9.5	9.5		
17			---	---	---	---	15.5	10.0	10.0	10.0		
18			12.5	6.5	---	---	15.0	9.5	8.0	8.0		
19			12.5	7.0	---	---	14.0	7.5	9.0	9.0		
20			12.5	5.0	---	---	13.0	8.5	10.0	10.0		
21			11.0	6.5	---	---	12.0	7.0	10.5	10.5		
22			---	---	---	---	12.0	5.0	10.5	10.5		
23			11.5	8.5	---	---	12.5	5.5	10.5	10.5		
24			12.5	5.0	---	---	12.5	5.5	---	---		
25			11.0	6.5	---	---	12.0	6.5	---	---		
26			---	---	---	---	12.5	7.0	---	---		
27			11.5	8.5	---	---	13.5	7.0	---	---		
28			12.5	8.0	---	---	12.5	7.5	---	---		
29			14.0	7.0	---	---	12.0	8.5	---	---		
30			13.5	8.5	---	---	13.0	8.0	---	---		
31			---	---	---	---	11.0	6.5	---	---		

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	.00			.00			.00		---
2	.00			.00			.00		---
3	.00			.00			.00		---
4	.00			.00			.00		---
5	.00			.00			.00		---
6	.00			.00			.00		---
7	.00			.00			.00		---
8	.00			.00			.00		---
9	.00			.00			.00		---
10	.00			.00			.00		---
11	.00			.00			.00		---
12	.00			.00			.00		---
13	.00			.00			.00		---
14	.00			.00			.00		---
15	.00			.00			.00		---
16	.00			.00			.00		---
17	.00			.00			.00		---
18	.00			.00			.00		---
19	.00			.00			.00		---
20	.00			.00			.00		---
21	.00			.00			.00		---
22	.00			.00			.00		---
23	.00			.00			.00		---
24	.00			.00			.00		---
25	.00			.00			.00		---
26	.00			.00			3.6		.33
27	.00			.00			11		1.4
28	.00			.00			9.5		1.1
29	.00			---			11		1.4
30	.00			---			13		1.9
31	.00			---			16		2.5
TOTAL	0.00			0.00			64.10		8.63

PARACHUTE CREEK BASIN

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	16	---	2.5	47	---	16	22	---	4.2
2	11	---	1.4	47	---	16	20	---	3.5
3	9.0	---	1.0	57	---	26	18	---	3.0
4	8.7	---	1.0	62	---	33	17	---	2.6
5	9.2	---	1.1	51	---	19	18	---	2.8
6	9.5	---	1.1	45	---	15	15	---	2.1
7	10	44	1.2	42	---	13	14	---	1.8
8	12	---	1.6	34	---	8.8	13	---	1.6
9	13	---	1.9	32	---	8.0	12	---	1.3
10	11	---	1.4	33	---	8.4	11	---	1.1
11	12	---	1.6	35	92	8.7	10	---	.95
12	14	---	2.1	43	---	14	9.8	---	.92
13	16	---	2.5	58	---	27	9.2	---	.83
14	18	---	3.1	76	---	68	8.8	---	.73
15	18	---	3.1	79	---	80	8.5	---	.69
16	14	---	2.1	99	---	330	8.2	---	.63
17	12	---	1.6	107	1680	485	8.0	---	.60
18	13	---	1.9	83	---	100	7.2	---	.50
19	13	54	1.9	69	---	47	7.2	---	.48
20	15	---	2.3	63	---	35	7.0	---	.45
21	16	---	2.5	62	---	33	6.8	---	.42
22	14	---	2.1	60	---	30	6.2	---	.36
23	14	---	2.1	59	---	28	6.0	---	.33
24	17	---	2.8	58	---	27	5.8	---	.31
25	18	---	3.1	42	---	13	5.2	---	.26
26	30	---	7.1	36	---	9.8	5.0	---	.24
27	41	---	12	33	---	8.4	4.8	---	.22
28	43	---	14	31	---	7.5	4.8	16	.21
29	42	---	13	28	---	6.4	5.0	---	.23
30	42	---	13	26	---	5.6	5.2	---	.26
31	---	---	---	24	78	5.1	---	---	---
TOTAL	531.4	---	108.1	1621	---	1531.7	298.7	---	33.62

09092970 EAST FORK PARACHUTE CREEK NEAR RULISON, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	4.2	---	.21	1.7	29	.13	.63	6	.01
2	4.2	---	.22	1.8	---	.15	.63	---	.01
3	4.0	---	.22	1.5	---	.11	.63	14	.02
4	3.8	---	.22	1.4	---	.10	.60	---	.01
5	3.5	22	.21	1.3	---	.09	.60	---	.01
6	3.2	44	.38	1.2	---	.07	.60	---	.01
7	3.2	50	.43	1.2	---	.07	.60	---	.01
8	2.8	31	.23	1.2	---	.07	.74	---	.02
9	2.8	32	.24	1.2	---	.07	.65	---	.01
10	2.5	24	.16	1.3	---	.09	.60	---	.01
11	2.8	22	.17	1.4	---	.10	.82	---	.03
12	2.8	---	.25	1.3	---	.09	.82	---	.03
13	2.3	30	.19	1.5	---	.11	.82	---	.03
14	2.3	34	.21	1.8	---	.15	.82	---	.03
15	2.4	26	.17	1.8	---	.15	.74	---	.02
16	2.5	---	.22	1.2	---	.07	.74	---	.02
17	2.4	---	.21	1.2	---	.07	.91	---	.04
18	2.2	---	.19	1.2	---	.07	1.7	---	.13
19	2.1	50	.28	1.1	---	.06	1.5	---	.11
20	2.1	43	.24	.99	---	.05	1.3	---	.09
21	2.0	38	.21	1.1	---	.06	1.2	---	.07
22	1.9	46	.24	1.2	---	.07	.99	---	.05
23	1.9	61	.31	1.2	---	.07	.91	---	.04
24	1.9	39	.20	.91	---	.04	.82	---	.03
25	2.0	35	.19	.91	---	.04	.74	---	.02
26	2.0	82	.44	.91	---	.04	.74	---	.02
27	2.0	54	.29	.82	---	.03	.74	---	.02
28	1.7	45	.21	.82	---	.03	.74	---	.02
29	1.8	41	.20	.82	---	.03	.74	---	.02
30	1.8	41	.20	.65	---	.01	.74	---	.02
31	1.7	43	.20	.74	10	.02	---	---	---
TOTAL	78.8	---	7.34	37.37	---	2.31	24.81	---	0.96
YEAR	2656.18		1692.66						

09092980 BEN GOOD CREEK NEAR RULISON, CO

LOCATION.--Lat 39°35'25", long 108°02'26", in NE¼NW¼ sec.27, T.5 S., R.95 W., Garfield County, Hydrologic unit 14010006, on left bank 0.2 mi (0.3 km) upstream from East Fork Parachute Creek and 8.3 mi (13.4 km) northwest of Rulison.

DRAINAGE AREA.--4.04 mi² (10.46 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,520 ft (1,990 m), from topographic map.

REMARKS.--Records good. No regulation or diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 8.5 ft³/s (0.241 m³/s) May 16, 1978, gage height 2.48 ft (0.756 m); no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.5 ft³/s (0.241 m³/s) at 0800 May 16, 1978, gage height, 2.48 ft (0.756 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	2.2	1.1	.40	.22	.12
2	.00	.00	.00	.00	.00	.00	.00	2.2	1.0	.40	.19	.12
3	.00	.00	.00	.00	.00	.00	.00	2.4	.87	.40	.18	.12
4	.00	.00	.00	.00	.00	.00	.00	2.8	.87	.40	.17	.12
5	.00	.00	.00	.00	.00	.00	.00	2.7	1.0	.39	.17	.12
6	.00	.00	.00	.00	.00	.00	.00	2.6	.90	.38	.17	.12
7	.00	.00	.00	.00	.00	.00	.00	2.3	.69	.37	.17	.12
8	.00	.00	.00	.00	.00	.00	.00	2.1	.64	.36	.16	.12
9	.00	.00	.00	.00	.00	.00	.00	1.8	.56	.35	.16	.11
10	.00	.00	.00	.00	.00	.00	.00	1.7	.52	.35	.15	.11
11	.00	.00	.00	.00	.00	.00	.00	1.7	.52	.34	.15	.12
12	.00	.00	.00	.00	.00	.00	.00	2.1	.51	.37	.15	.12
13	.00	.00	.00	.00	.00	.00	.00	2.7	.48	.36	.16	.11
14	.00	.00	.00	.00	.00	.00	.00	3.7	.47	.35	.16	.11
15	.00	.00	.00	.00	.00	.00	.25	5.7	.45	.33	.15	.11
16	.00	.00	.00	.00	.00	.00	.49	7.0	.45	.33	.15	.11
17	.00	.00	.00	.00	.00	.00	.52	5.9	.44	.32	.15	.11
18	.00	.00	.00	.00	.00	.00	.44	4.4	.44	.30	.15	.12
19	.00	.00	.00	.00	.00	.00	.41	3.1	.45	.30	.15	.12
20	.00	.00	.00	.00	.00	.00	.42	3.0	.43	.30	.15	.12
21	.00	.00	.00	.00	.00	.00	.58	3.1	.37	.30	.14	.11
22	.00	.00	.00	.00	.00	.00	.64	3.0	.37	.27	.13	.11
23	.00	.00	.00	.00	.00	.00	.75	2.8	.37	.27	.13	.10
24	.00	.00	.00	.00	.00	.00	.76	2.8	.36	.25	.13	.10
25	.00	.00	.00	.00	.00	.00	.82	2.5	.36	.23	.12	.10
26	.00	.00	.00	.00	.00	.00	1.1	2.1	.36	.22	.12	.10
27	.00	.00	.00	.00	.00	.00	2.0	1.9	.35	.21	.12	.10
28	.00	.00	.00	.00	.00	.00	1.9	1.7	.34	.21	.12	.10
29	.00	.00	.00	.00	---	.00	2.0	1.6	.35	.21	.12	.10
30	.00	.00	.00	.00	---	.00	2.2	1.4	.35	.22	.12	.10
31	.00	---	.00	.00	---	.00	---	1.4	---	.22	.12	---
TOTAL	.00	.00	.00	.00	.00	.00	15.28	86.4	16.37	9.71	4.63	3.35
MEAN	.000	.000	.000	.000	.000	.000	.51	2.79	.55	.31	.15	.11
MAX	.00	.00	.00	.00	.00	.00	2.2	7.0	1.1	.40	.22	.12
MIN	.00	.00	.00	.00	.00	.00	.00	1.4	.34	.21	.12	.10
AC-FT	.00	.00	.00	.00	.00	.00	30	171	32	19	9.2	6.6

CAL YR 1977 TOTAL 0.46 MEAN .001 MAX .23 MIN .00 AC-FT .90
WTR YR 1978 TOTAL 135.74 MEAN .37 MAX 7.0 MIN .00 AC-FT 269

09092980 BEN GOOD CREEK NEAR RULISON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
APR 21...	1315	.53	535	7.8	5.0	9.4	260	0	57	27	47	1.3
MAY 04...	1030	2.7	490	7.3	2.5	10.2	200	0	45	21	38	1.2
JUN 28...	1400	.34	560	8.2	13.5	9.4	240	8	50	27	45	1.3
JUL 12...	1430	.33	580	8.1	15.5	7.5	220	0	46	26	46	1.3

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
APR 21...	.9	340	0	280	58	2.9	.5	17	384	1.0	.03	4
MAY 04...	1.0	280	0	230	46	3.2	.3	17	318	1.6	.00	2
JUN 28...	.8	280	0	230	56	4.4	.6	14	340	.54	.01	2
JUL 12...	1.3	300	0	250	53	2.9	.6	19	347	.44	.03	3

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
APR 21...	400	70	1	2	30	2	10	0	.0	1	1500	20
MAY 04...	0	50	0	2	60	0	0	0	.0	0	1200	10
JUN 28...	200	100	3	2	10	10	20	5	.0	0	1400	10
JUL 12...	200	100	3	2	10	2	20	0	.0	0	1500	10

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO

LOCATION.--Lat 39°34'02", long 108°06'37", in SE¼SE¼ sec.36, T.5 S., R.96 W., Garfield County, Hydrologic Unit 14010005, on left bank 0.3 mi (0.5 km) upstream from Gardner Gulch, 0.6 mi (1.0 km) downstream from confluence of West and East Forks, and 8.5 mi (13.7 km) north of Grand Valley.

DRAINAGE AREA.--141 mi² (365 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to September 1954, October 1964 to September 1970, April 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,730 ft (1,747 m), from topographic map. Prior to Apr. 1, 1975, at sites 0.4 mi (0.6 km) downstream at different datums.

REMARKS.--Records good. Diversions for irrigation of about 75 acres (304,000 m²) above station. One diversion from East Fork bypasses station for irrigation of about 100 acres (405,000 m²) below station.

AVERAGE DISCHARGE.--15 years (water years 1949-54, 1965-70, 1976-78), 17.9 ft³/s (0.507 m³/s), 12,970 acre-ft/yr (16.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) Aug. 19, 1977, gage height, 6.11 ft (1.862 m), from highwater mark, from rating curve extended above 150 ft³/s (4.2 m³/s), on basis of slope-area measurements at gage heights 4.25 and 6.11 ft (1.295 and 1.862 m); no flow Dec. 2, 1948, many days 1964-67 and 1976-77.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 4	0600	237	6.71	3.77	1.149	May 17	0400	a*309	8.75	3.97	1.210

a Rating curve extended as explained under PERIOD OF RECORD.

Minimum daily discharge, 0.28 ft³/s (0.008 m³/s) Mar. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.52	.61	.67	.40	.28	20	108	84	25	5.5	2.8
2	.49	.55	.52	.67	.46	.28	28	115	76	24	5.5	2.4
3	.46	.55	.52	.73	.58	.43	29	196	69	22	4.9	1.8
4	.49	.55	.52	.67	.67	.34	32	199	65	21	4.9	1.2
5	.55	.58	.55	.64	.70	.38	35	174	68	21	4.6	1.9
6	.75	.70	.67	.52	.87	.43	38	143	62	20	4.6	1.8
7	1.2	.75	.55	.49	.80	.49	50	123	57	18	4.3	1.7
8	.80	.58	.58	.67	.94	.58	64	111	54	17	4.3	1.9
9	.80	.55	.70	.75	1.4	.70	73	98	50	17	4.3	1.8
10	.80	.58	.55	.80	.49	1.1	56	96	47	15	4.3	1.8
11	.87	.46	.61	.80	.55	1.2	56	100	46	15	4.9	1.6
12	.87	.38	.58	.58	.52	1.2	69	115	44	14	4.6	1.5
13	.87	.40	.67	.58	.52	1.2	68	145	36	13	4.9	1.6
14	.94	.40	.61	.55	.49	1.3	91	212	32	12	5.2	1.7
15	.94	.37	.61	.49	.46	1.6	77	252	33	11	4.6	1.8
16	.94	.40	.64	.36	.40	2.5	71	255	33	10	4.6	1.8
17	.94	.38	.64	.34	.40	1.5	67	291	32	8.5	4.3	1.8
18	1.0	.38	.64	.46	.40	1.6	59	253	31	8.2	4.3	1.7
19	.94	.40	.61	.70	.43	1.6	57	191	29	7.3	4.3	1.5
20	1.0	.52	.58	.55	.43	1.8	56	173	28	6.7	4.0	1.5
21	1.2	.49	.55	.55	.43	3.1	58	172	27	6.4	3.8	1.7
22	1.2	.80	.58	.55	.43	4.6	53	169	26	6.1	3.8	1.8
23	1.2	.64	.58	.55	.43	4.6	51	162	26	5.8	3.6	1.8
24	1.2	.55	.64	.58	.43	5.1	46	152	26	5.8	3.6	1.6
25	1.4	.55	.64	.58	.38	4.5	51	143	25	5.8	3.4	1.8
26	1.4	.52	.61	.58	.36	4.6	71	130	25	5.5	3.4	1.8
27	1.2	.55	.64	.58	.31	5.1	104	116	26	5.5	3.2	1.8
28	1.0	.55	.64	.55	.30	5.7	113	102	27	5.5	3.2	1.8
29	.80	.61	.55	.55	---	6.5	101	94	27	5.8	3.0	1.7
30	.70	.58	.58	.55	---	6.8	104	86	27	5.5	3.0	1.7
31	.64	---	.64	.52	---	10	---	86	---	5.2	2.8	---
TOTAL	28.08	15.84	18.61	18.16	14.98	81.11	1848	4762	1238	368.6	129.7	53.3
MEAN	.91	.53	.60	.59	.54	2.62	61.6	154	41.3	11.9	4.18	1.78
MAX	1.4	.80	.70	.80	1.4	10	113	291	84	25	5.5	2.8
MIN	.46	.37	.52	.34	.30	.28	20	86	25	5.2	2.8	1.2
AC-FT	56	31	37	36	30	161	3670	9450	2460	731	257	106

CAL YR 1977 TOTAL 666.97 MEAN 1.83 MAX 155 MIN .00 AC-FT 1320
WTR YR 1978 TOTAL 8576.38 MEAN 23.5 MAX 291 MIN .28 AC-FT 17010

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1975 to current year.
WATER TEMPERATURE: April 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1975.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,560 micromhos Oct. 27, 1977; minimum, 239 micromhos May 16, 1975.
WATER TEMPERATURES: Maximum, 34.0°C July 30, 1977; minimum, 0.0°C Mar. 30, and several days in November 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,560 micromhos Oct. 27; minimum, 492 micromhos Oct. 6.
WATER TEMPERATURES: Maximum, 25.5°C June 12; minimum, 0.0°C several days in November.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 31...	1140	.32	760	8.5	5.0	11.8	320	21	57	44	72
NOV 30...	1400	.55	840	8.6	6.0	10.8	340	0	55	48	82
DEC 21...	1515	.46	810	8.4	.0	12.1	340	5	55	50	85
JAN 11...	1000	.57	850	8.3	4.0	10.6	350	30	57	50	86
FEB 09...	1530	.53	850	8.3	5.5	10.2	340	13	56	49	83
MAR 15...	1200	1.5	850	7.9	7.5	10.2	350	32	60	49	83
APR 13...	1200	78	550	7.6	8.0	9.0	240	0	53	27	42
MAY 15...	1030	251	435	7.9	14.0	8.6	210	0	50	20	29
JUN 27...	1115	27	680	7.7	12.0	9.2	290	4	59	35	56
JUL 11...	1200	16	700	7.9	13.5	8.5	310	55	61	38	57
AUG 21...	1045	4.1	730	7.7	12.0	8.8	290	95	59	35	55

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT 31...	1.7	4.0	370	0	300	150	7.9	.7	17	537
NOV 30...	2.0	3.6	420	0	340	160	8.0	.9	18	583
DEC 21...	2.0	3.8	400	6	340	150	8.3	.8	18	574
JAN 11...	2.0	3.3	390	0	320	150	8.4	.9	19	569
FEB 09...	2.0	3.5	400	0	330	160	9.3	.9	18	577
MAR 15...	1.9	3.4	390	0	320	150	14	.8	16	569
APR 13...	1.2	2.2	300	0	250	76	3.7	.3	14	367
MAY 15...	.9	1.8	260	0	210	39	3.7	.2	16	288
JUN 27...	1.4	2.2	350	0	290	97	5.8	.6	17	445
JUL 11...	1.4	2.5	310	0	250	100	6.1	.6	18	436
AUG 21...	1.4	2.4	240	0	200	200	7.1	.7	18	496

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 31...	.49	.07	.06	.13	.62	.05	130	50	--	3.5
NOV 30...	.87	.06	.06	.12	.99	.00	150	10	--	7.1
DEC 21...	.85	.00	.25	.25	1.1	.02	140	20	2.3	--
JAN 11...	1.1	.06	.29	.35	1.5	.07	140	30	2.7	2.8
FEB 09...	.76	.01	.07	.08	.84	.03	140	10	2.4	2.6
MAR 15...	1.1	.01	.38	.39	1.5	.07	140	10	--	5.2
APR 13...	1.5	.01	3.1	3.1	4.6	1.8	70	30	30	4.2
MAY 15...	.59	.00	2.1	2.1	2.7	3.2	60	180	62	7.9
JUN 27...	1.1	.00	.19	.19	1.3	.02	100	30	--	7.0
JUL 11...	.96	.01	.42	.43	1.4	.02	100	20	3.9	3.3
AUG 21...	1.1	.01	.26	.27	1.4	.02	120	20	8.2	5.0

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)
OCT 31...	--	--	3	5	100	0	0	0	10	0	--	15
JAN 11...	830	10	5	4	0	100	0	0	0	0	0	0
APR 13...	--	50	30	4	900	100	0	0	0	0	40	0

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)
OCT 31...	<50	0	<10	1	<100	0	30	30	20	20	.0	.0
JAN 11...	0	0	4	1	2	1	40	40	20	0	.0	.0
APR 13...	15	0	35	0	21	3	40	20	1200	10	.0	.0

DATE	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 31...	10	7	<50	0	2	2	1200	1200	7.9	20	10	.00
JAN 11...	15	15	6	0	3	2	1300	1400	8.1	20	0	.00
APR 13...	8	9	20	0	1	0	1300	980	7.0	130	10	.00

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	656	751	835	840	854	872	563	480	593	674	605	806
2	654	757	820	859	852	878	610	480	593	677	515	808
3	660	755	822	830	853	854	634	475	595	682	520	812
4	715	751	821	826	864	869	641	470	600	684	630	816
5	719	751	823	838	858	866	641	470	605	584	635	823
6	726	742	820	838	848	860	638	465	605	686	645	823
7	700	746	817	842	850	871	609	460	610	691	655	803
8	686	760	819	842	840	880	585	460	615	699	660	802
9	693	816	823	834	850	848	566	455	615	702	670	804
10	696	811	811	784	850	870	591	450	620	706	580	797
11	697	807	816	849	855	858	579	450	625	721	685	801
12	699	806	851	851	850	861	554	445	630	735	695	804
13	690	816	836	859	845	862	544	440	630	734	700	808
14	741	826	815	860	840	856	540	435	635	723	710	810
15	763	826	809	842	840	858	540	435	640	720	720	802
16	708	831	819	858	837	873	535	445	640	717	725	799
17	724	829	829	849	837	863	530	455	645	698	735	819
18	725	832	812	858	900	865	525	470	650	684	740	804
19	731	813	834	862	790	867	525	480	650	622	750	799
20	735	850	854	863	785	863	520	490	655	509	760	812
21	731	863	867	866	801	816	515	500	660	515	770	827
22	733	820	837	863	814	766	515	510	660	525	775	830
23	740	825	831	857	868	798	510	525	665	535	779	828
24	742	837	834	880	875	800	505	535	670	540	785	827
25	755	838	833	876	872	843	505	545	675	550	788	805
26	747	832	834	875	846	852	500	555	675	555	791	810
27	838	833	838	870	860	813	495	565	680	565	793	808
28	755	839	837	860	877	652	490	580	692	575	794	791
29	752	846	823	855	---	628	490	590	677	580	796	752
30	734	820	808	855	---	617	485	604	669	590	798	779
31	747	---	811	850	---	566	---	595	---	595	802	---

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	---	6.0	.5	3.5	1.0	1.5	1.0	10.5	1.5	8.0	4.5
2	17.0	---	7.5	.5	7.0	3.0	1.5	1.0	9.0	1.0	13.5	4.5
3	19.0	---	9.5	.5	8.0	5.0	5.0	1.0	8.5	1.0	6.5	1.5
4	19.0	---	11.5	.0	8.0	4.0	5.0	2.0	8.5	1.0	12.0	2.5
5	18.5	9.5	12.0	2.0	6.5	1.0	6.0	2.5	7.0	1.0	9.5	6.0
6	13.0	8.5	10.0	5.5	6.5	1.0	6.0	3.0	8.5	1.5	13.0	3.0
7	12.0	6.5	11.5	4.5	7.0	1.0	6.5	1.0	10.0	4.5	15.5	4.0
8	15.0	4.0	4.5	.5	5.0	1.0	4.0	1.0	10.0	1.5	15.0	2.0
9	13.5	4.5	1.0	.0	5.0	1.0	6.0	1.0	---	---	13.5	3.5
10	12.0	5.0	1.0	.0	7.0	1.5	6.0	3.0	---	---	12.0	4.0
11	12.0	1.5	4.0	.0	7.0	1.0	7.0	4.0	---	---	13.0	4.5
12	13.0	1.5	8.5	.5	6.5	1.5	7.0	2.0	---	---	11.0	5.5
13	13.0	2.0	7.0	.5	6.0	1.0	6.0	1.0	---	---	12.0	5.0
14	15.0	3.5	7.5	.0	7.5	2.5	5.5	1.0	---	---	10.5	3.0
15	15.5	4.0	8.5	.5	8.0	3.5	5.0	2.0	---	---	12.0	1.0
16	15.5	4.0	7.5	.0	5.0	1.0	7.5	3.5	---	---	14.5	1.0
17	15.5	4.0	5.5	.0	2.5	1.0	6.5	2.0	---	---	17.0	2.0
18	12.0	4.0	6.5	1.5	4.5	1.0	8.5	1.0	---	---	17.0	3.5
19	12.5	3.0	5.0	.0	2.0	1.0	6.5	1.0	6.5	1.5	13.0	5.0
20	12.5	2.5	1.0	.5	1.5	1.0	7.0	2.5	7.5	1.5	19.0	5.5
21	14.0	7.0	1.0	.5	1.0	1.0	8.5	1.0	10.5	1.5	16.5	4.5
22	14.0	5.0	1.0	.5	3.5	1.0	7.0	1.5	7.0	1.0	10.0	5.0
23	13.0	3.0	6.0	.5	4.0	1.0	6.0	1.0	11.5	1.0	14.5	5.5
24	11.5	3.5	6.5	1.5	6.0	2.5	4.0	1.0	11.5	1.0	13.5	2.0
25	13.5	3.0	8.0	3.5	5.5	1.5	5.0	1.0	11.5	3.0	17.0	3.0
26	14.0	3.0	7.5	2.5	5.5	1.0	---	---	11.5	1.5	17.5	4.0
27	13.0	4.0	5.0	1.5	4.5	2.0	---	---	9.5	4.0	18.5	4.5
28	13.5	3.5	6.5	2.0	6.5	4.0	---	---	12.5	2.5	16.5	5.5
29	12.5	5.0	5.0	.5	6.5	4.0	---	---	---	---	17.5	5.0
30	10.5	3.5	6.5	1.0	6.5	1.5	---	---	---	---	16.5	5.0
31	5.5	.5	---	---	5.0	1.0	---	---	---	---	13.0	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	5.0	---	---	13.0	5.5	16.0	8.5	17.5	9.5	16.5	8.0
2	8.5	4.0	---	---	13.0	6.5	16.0	8.0	16.5	9.0	17.5	8.0
3	9.0	4.5	---	---	13.0	7.0	16.0	8.0	18.0	9.0	17.5	8.5
4	13.0	3.5	---	---	12.0	8.5	15.5	7.5	18.0	8.5	17.0	8.5
5	11.0	5.5	---	---	10.0	8.0	16.0	7.5	18.5	8.0	18.0	8.5
6	13.5	4.5	---	---	14.5	6.5	15.5	8.0	17.5	8.5	18.0	8.5
7	11.5	4.5	---	---	13.5	8.0	16.5	8.0	20.5	9.0	17.0	9.0
8	13.5	5.0	---	---	16.0	7.5	16.5	8.0	20.5	9.0	16.5	8.5
9	6.5	3.5	---	---	22.0	8.0	16.5	8.5	20.5	9.5	17.5	8.5
10	9.0	2.5	---	---	20.0	9.0	17.5	9.5	19.5	9.5	15.5	8.5
11	13.0	3.5	---	---	23.0	8.5	16.0	9.5	17.5	9.5	13.5	8.0
12	12.0	4.0	---	---	25.5	7.0	17.5	9.0	19.0	9.5	14.5	6.5
13	---	---	---	---	---	8.0	17.5	8.0	15.0	9.5	14.5	5.5
14	---	---	---	---	---	8.0	18.0	8.5	13.0	8.0	13.5	6.0
15	---	---	---	---	---	7.5	15.5	9.0	16.5	6.5	16.0	7.5
16	---	---	---	---	---	7.5	16.5	9.5	18.0	7.0	16.0	7.5
17	---	---	---	---	---	7.0	17.5	10.0	21.5	8.0	14.5	9.0
18	---	---	---	---	---	7.0	18.0	9.0	17.5	7.0	9.5	7.0
19	---	---	---	---	---	9.0	17.5	9.5	20.5	6.0	10.0	6.0
20	---	---	---	---	---	7.0	18.0	9.5	23.5	7.0	11.0	5.0
21	---	---	---	---	---	9.0	16.0	9.0	17.0	8.5	13.0	4.0
22	---	---	---	---	---	10.0	18.0	8.0	15.5	9.5	14.5	5.0
23	---	---	---	---	---	8.5	18.0	8.0	17.0	8.5	15.5	6.5
24	---	---	---	---	---	11.5	17.5	8.5	17.5	8.0	13.5	7.5
25	---	---	---	---	---	9.5	16.5	8.5	16.5	8.0	15.0	7.0
26	---	---	---	---	---	7.0	18.5	9.0	17.0	8.0	16.0	7.0
27	---	---	---	---	15.0	8.0	18.5	9.0	16.5	7.0	15.5	7.0
28	---	---	---	---	13.0	9.5	16.5	9.5	16.5	7.5	16.0	7.0
29	---	---	---	---	13.5	9.0	15.5	10.0	16.5	7.5	15.5	7.0
30	---	---	---	---	16.0	9.0	18.5	9.5	16.0	7.5	15.0	6.0
31	---	---	10.5	6.5	---	---	15.5	8.5	16.0	8.0	---	---

09093000 PARACHUTE CREEK NEAR GRAND VALLEY, CO--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
31...	1145	.32	82	.07
NOV				
18...	1115	.46	14	.02
30...	1515	.55	4	.01
DEC				
13...	1250	1.1	4	.01
21...	1510	.46	10	.01
JAN				
11...	1030	.57	79	.12
FEB				
09...	1535	.53	4	.01
MAR				
17...	1140	1.4	56	.22
27...	1000	3.5	526	5.0
APR				
13...	1045	78	2740	577
MAY				
15...	1030	251	2940	1990
30...	1135	92	184	46
JUN				
27...	1100	27	26	1.9
JUL				
11...	1130	16	8	.35
AUG				
21...	1025	4.1	5	.06

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO

LOCATION.--Lat 39°27'11", long 108°03'33", in SE¼NW¼ sec.12, T.7 S., R.96 W., Garfield County, Hydrologic Unit 14010006, on left bank 1,300 ft (396 m) upstream from cemetery bridge in Grand Valley, 2,000 ft (610 m) downstream from headgate of Diamond ditch, and 1.4 mi (2.3 km) upstream from mouth.

DRAINAGE AREA.--196 mi² (513 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to September 1927, October 1948 to September 1954, October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,108 ft (1,547 m), from topographic map. Nonrecording gage Apr. 7, 1921, to Sept. 30, 1927; water-stage recorder Oct. 1, 1948, to Sept. 30, 1954, at site 75 ft (23 m) upstream at different datum; and October 1974 to December 23, 1975, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records fair except those for winter period and those for period of no gage-height record, which are poor. Diversions above station for irrigation of 1,400 acres (5.67 km²) and 400 acres (1.62 km²) along Colorado River.

AVERAGE DISCHARGE.--16 years (water years 1922-27, 1949-54, 1975-78), 28.5 ft³/s (0.807 m³/s), 20,650 acre-ft/yr (25.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s (73.6 m³/s) July 31, 1976, gage height, 9.47 ft (2.886 m), from high-water marks, result of slope-area measurement; no flow for short periods 1926-27, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 5	0100	238	6.74	4.55	1.387	May 16	1100	*335	9.49	4.90	1.494

Minimum daily discharge, 0.56 ft³/s (0.016 m³/s) Aug. 22-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	5.1	5.8	7.5	6.2	9.9	34	195	59	12	1.6	1.4
2	.20	5.0	6.1	11	6.2	18	48	205	50	11	1.5	2.0
3	.20	5.3	6.0	8.2	6.0	10	48	215	48	10	1.2	1.4
4	.25	5.3	6.2	8.0	6.1	13	44	230	44	9.8	1.2	1.4
5	.75	5.5	6.2	8.1	6.1	24	42	238	41	9.8	1.0	1.5
6	1.0	5.5	6.2	8.1	6.0	20	42	232	43	9.5	1.0	1.7
7	3.9	5.7	6.1	7.7	6.1	13	48	210	39	9.5	.80	1.8
8	3.7	5.7	7.1	7.2	6.1	10	57	176	36	9.2	.80	1.8
9	3.5	6.0	8.9	5.9	6.2	9.5	69	150	34	9.2	.80	1.5
10	3.5	5.9	8.9	6.1	6.2	9.8	68	140	32	8.9	.80	1.6
11	3.5	5.9	9.2	6.2	6.8	8.9	65	138	30	8.9	1.2	1.4
12	3.5	5.7	9.2	6.2	6.7	10	71	158	28	8.4	1.0	1.2
13	3.7	6.0	7.8	6.3	6.5	8.9	82	190	28	8.1	1.2	1.2
14	3.7	6.0	4.1	6.4	6.5	7.6	96	252	24	7.6	1.4	1.5
15	3.7	6.2	3.9	6.5	6.5	8.0	116	294	20	7.3	1.0	1.8
16	3.5	6.2	3.7	6.5	6.6	8.6	144	307	20	7.0	.90	2.2
17	3.5	6.5	3.5	6.5	6.4	8.4	166	307	20	6.5	.80	2.4
18	3.7	6.5	3.3	6.2	7.6	8.9	158	261	20	5.7	.80	2.6
19	3.7	7.3	3.3	6.2	6.6	9.5	130	208	19	4.8	.80	2.8
20	3.7	5.6	3.3	6.2	6.7	10	124	176	18	4.1	.60	3.0
21	3.9	4.5	3.3	6.2	6.7	11	122	164	17	3.7	.50	2.8
22	4.1	4.1	3.7	6.2	6.4	19	112	158	16	3.1	.56	2.8
23	4.1	4.4	3.9	6.2	6.2	14	110	140	15	2.8	.56	2.6
24	4.1	4.4	4.1	6.5	6.0	16	107	130	14	2.4	.56	2.6
25	4.3	4.6	4.4	7.1	6.0	13	106	110	13	2.2	.56	2.4
26	4.3	4.7	4.8	6.1	6.5	13	128	95	13	2.0	.56	2.8
27	4.1	5.0	5.0	6.0	9.4	13	170	83	12	1.7	.56	3.0
28	4.4	5.0	5.3	6.0	8.8	14	186	76	11	1.6	.56	3.0
29	4.1	5.3	7.3	6.2	---	14	190	71	12	1.7	.72	3.1
30	7.3	5.3	7.5	6.1	---	16	186	83	12	1.6	.72	3.1
31	5.2	---	7.5	6.2	---	18	---	69	---	1.4	.88	---
TOTAL	103.25	164.2	175.6	209.8	184.1	387.0	3069	5461	788	191.5	27.34	64.4
MEAN	3.33	5.47	5.66	6.77	6.58	12.5	102	176	26.3	6.18	.88	2.15
MAX	7.3	7.3	9.2	11	9.4	24	190	307	59	12	1.6	3.1
MIN	.15	4.1	3.3	5.9	6.0	7.6	34	69	11	1.4	.56	1.2
AC-FT	205	326	348	416	365	768	6090	10830	1560	380	54	128

CAL YR 1977 TOTAL 1751.53 MEAN 4.80 MAX 151 MIN .08 AC-FT 3470
WTR YR 1978 TOTAL 10825.19 MEAN 29.7 MAX 307 MIN .15 AC-FT 21470

NOTE.--NO GAGE-HEIGHT RECORD JUNE 5 TO SEPT. 30.

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1975 to current year.
WATER TEMPERATURE: January 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1975. Pumping sediment sampler since October 1974.

REMARKS.--Prior to Dec. 23, 1975, station was 0.5 mi (0.8 km) downstream from present location. Since May 1976, daily samples of suspended sediment have been collected by an observer to better define the pumping sediment record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,440 micromhos June 4, 1977; minimum, 381 micromhos May 27, 1975.
WATER TEMPERATURES: Maximum, 32.0°C June 26, 1977, July 26, 27, 30, 1978; minimum, 0.0°C Mar. 5, Dec. 20-23, 1977.
SEDIMENT CONCENTRATIONS: Maximum daily, 95,000 mg/L Aug. 25, 1977; minimum daily, 3 mg/L July 18, 1977.
SEDIMENT LOADS: Maximum daily, 82,000 tons (74,400 t) July 31, 1976; minimum daily, less than 0.005 ton (0.005 t) on many days during 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, not determined; minimum, 520 micromhos May 16.
WATER TEMPERATURES: Maximum, 32.0°C July 26, 27, 30; minimum, 0.0°C Dec. 20-23.
SEDIMENT CONCENTRATIONS: Maximum daily, 19,500 mg/L Mar. 5; minimum daily, 5 mg/L Aug. 24.
SEDIMENT LOADS: Maximum daily, 2,830 tons (2,570 t), May 16; minimum daily, 0.01 ton (0.01 t) on many days during year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT												
21...	1010	3.9	1400	8.4	10.0	10.0	500	120	87	67	110	2.2
NOV												
29...	1045	5.2	1230	8.2	3.5	11.0	510	130	90	69	110	2.1
DEC												
20...	1100	3.2	1270	8.3	.0	12.3	620	240	110	84	150	2.6
FEB												
10...	1000	6.1	1125	8.1	3.5	11.1	460	110	84	60	100	2.0
MAR												
16...	1045	7.9	1220	7.8	4.0	11.2	490	140	91	64	100	2.0
APR												
14...	1230	94	625	7.8	10.0	9.4	280	29	60	32	47	1.2
MAY												
16...	1300	304	520	7.8	14.0	9.0	240	11	55	25	38	1.1
JUN												
29...	1200	12	1150	8.0	17.5	9.0	440	120	78	59	100	2.1
JUL												
17...	1200	6.5	1290	7.9	21.5	9.6	490	130	87	65	130	2.6
AUG												
22...	1145	.63	1630	7.9	18.0	9.8	610	360	110	82	170	3.0

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
OCT 21...	5.1	460	1	380	310	9.2	.9	17	837	.34	.00	3
NOV 29...	3.7	460	0	380	310	14	.9	18	846	.43	.01	4
DEC 20...	4.0	470	0	390	450	13	1.0	21	1070	.54	.01	2
FEB 10...	3.6	430	0	350	290	18	.9	18	792	.70	.01	3
MAR 16...	3.6	430	0	350	300	15	.9	16	808	.76	.00	4
APR 14...	2.6	310	0	250	100	7.0	.4	15	425	1.5	.04	5
MAY 16...	2.4	280	0	230	64	4.2	.3	16	352	1.6	.04	5
JUN 29...	4.4	390	0	320	250	12	.8	15	716	.59	.01	7
JUL 17...	4.7	430	0	350	340	17	.8	19	879	.30	.02	5
AUG 22...	4.7	310	0	250	500	16	.9	17	1060	.32	.01	4

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 21...	200	170	1	7	30	0	30	40	.0	1	1500	10
NOV 29...	300	160	0	1	10	0	40	40	.0	2	1600	10
DEC 20...	0	180	0	0	30	1	40	40	.0	3	730	0
FEB 10...	300	140	0	1	10	0	40	20	.0	5	1400	10
MAR 16...	0	140	1	1	0	10	40	20	.0	3	1500	0
APR 14...	100	80	0	0	30	2	20	20	.0	8	990	10
MAY 16...	0	50	1	1	--	21	10	0	.0	0	720	20
JUN 29...	200	140	3	2	10	9	40	20	.0	2	1500	20
JUL 17...	200	160	2	2	40	4	40	20	.0	3	1800	10
AUG 22...	200	200	1	3	20	8	40	20	.0	3	2000	20

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1340	1220	1220	1150	1160	679	585	769	1180	1500	1600
2	---	1340	1190	1320	1150	1160	649	580	788	1190	1500	1600
3	---	1330	1190	1230	1140	1170	660	580	809	1190	1500	1600
4	---	1300	1180	1160	1150	1170	671	575	827	1200	1500	1600
5	---	1290	1160	1140	1160	1180	669	575	810	1180	1500	1600
6	---	1270	1160	1150	1150	1180	674	575	772	1180	1550	1650
7	1490	1240	1160	1150	1150	1190	659	570	783	1200	1550	1650
8	1380	1220	1180	1170	1130	1190	640	571	789	1230	1550	1650
9	1320	1250	1200	1150	949	1200	629	588	828	1240	1550	1650
10	1330	1260	1190	1150	1050	1200	647	604	846	1240	1550	1650
11	1240	1250	1190	1140	1090	1200	670	606	871	1260	1600	1650
12	1210	1240	1180	1130	1090	1210	651	597	889	1260	1600	1650
13	1220	1240	1180	1140	1090	1210	631	581	900	1260	1600	1650
14	1270	1240	1180	1150	1090	1220	623	565	916	1280	1600	1650
15	1320	1230	1200	1130	1090	1220	620	556	918	1280	1600	1650
16	1330	1230	1190	1110	1090	1230	620	543	923	1280	1600	1650
17	1330	1220	1280	1110	1120	1210	615	540	932	1280	1600	1700
18	1330	1240	1240	1120	1200	1210	615	562	943	1300	1610	1640
19	1310	1230	1230	1130	1180	1190	610	599	948	1310	1600	1660
20	1320	1230	1290	1120	1150	1160	610	572	961	1360	1600	1660
21	1340	1240	1440	1120	1130	1120	605	596	987	1410	1600	1650
22	1340	1240	1330	1130	1130	1150	605	613	1020	1400	1630	1640
23	1340	1230	1260	1120	1130	1180	605	635	1040	1400	1600	1640
24	1340	1230	1230	1170	1140	1130	600	650	1050	1450	1600	1630
25	1340	1230	1210	1170	1140	1100	600	649	1080	1450	1600	1620
26	1340	1250	1210	1160	1150	1080	595	654	1100	1450	1600	1620
27	1340	1260	1200	1150	1150	1020	595	713	1110	1450	1600	1620
28	1340	1260	1180	1180	1150	861	590	736	1110	1450	1600	1610
29	1360	1240	1190	1180	---	791	590	754	1170	1450	1600	1600
30	1340	1200	1180	1160	---	762	585	762	1170	1450	1600	1600
31	1340	---	1180	1150	---	734	---	769	---	1450	1600	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.5	6.0	4.0	1.5	3.5	2.5	7.0	4.0	---	---
2	---	---	8.5	5.5	7.0	3.5	2.5	2.0	5.5	3.0	---	---
3	---	---	9.5	6.0	8.0	6.0	2.5	2.0	5.5	3.0	---	---
4	---	---	11.5	7.0	8.5	6.0	3.0	2.0	5.0	2.5	---	---
5	---	---	11.5	7.0	7.0	3.5	4.5	2.5	4.5	2.5	---	---
6	---	---	11.5	9.0	5.0	1.5	5.0	4.0	6.0	3.0	---	---
7	---	---	12.0	8.0	5.5	2.0	4.5	3.0	7.0	5.0	---	---
8	---	---	9.0	4.0	5.5	2.5	3.0	2.5	8.0	4.5	---	---
9	---	---	5.5	2.0	4.0	1.5	3.0	2.0	8.0	8.0	---	---
10	---	---	6.0	3.0	5.5	1.5	6.0	3.0	8.0	4.0	---	---
11	---	---	7.5	3.5	5.5	2.5	6.5	4.5	6.0	4.0	---	---
12	---	---	8.0	5.0	6.0	3.5	6.0	4.0	6.5	3.0	---	---
13	---	---	8.0	4.5	5.0	3.5	4.0	2.0	7.5	3.0	---	---
14	---	---	8.0	5.0	6.0	3.0	4.0	1.5	8.0	3.5	---	---
15	---	---	---	---	6.5	4.0	4.0	2.5	6.5	3.0	---	---
16	---	---	---	---	6.0	3.5	6.5	4.0	5.5	2.0	11.5	---
17	---	---	---	---	3.0	1.0	6.5	3.5	3.5	2.0	14.5	3.0
18	---	---	---	---	4.0	1.0	6.5	4.5	2.5	2.0	15.0	4.5
19	---	---	---	---	3.0	.5	5.0	2.5	4.0	2.0	11.5	6.0
20	---	---	---	---	2.0	.0	6.0	3.5	6.0	3.0	17.0	7.5
21	16.0	---	---	---	2.0	.0	6.5	4.0	7.5	3.5	17.0	6.5
22	14.5	8.0	---	---	2.0	.0	6.0	3.0	---	---	10.5	7.5
23	13.5	7.5	---	---	3.0	.0	5.0	3.0	---	---	13.5	6.5
24	12.0	7.0	---	---	4.0	.5	3.0	1.5	---	---	12.5	7.5
25	13.5	6.5	---	---	3.5	.5	3.0	1.5	---	---	14.5	4.5
26	13.5	7.0	---	---	3.0	.5	3.5	2.0	---	---	16.0	5.5
27	13.5	7.0	---	---	3.0	.5	5.5	2.5	---	---	16.5	6.5
28	13.5	7.0	---	---	4.5	1.0	2.5	1.5	---	---	17.0	7.5
29	13.0	8.0	---	---	5.0	2.0	4.5	2.0	---	---	17.5	7.0
30	11.5	9.0	---	---	5.5	3.0	4.5	2.0	---	---	17.0	7.5
31	9.5	7.5	---	---	5.5	3.5	5.0	2.5	---	---	18.0	9.0

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	8.0	---	---	15.5	8.0	24.0	13.0	29.5		---	
2	11.0	7.0	---	---	15.5	9.0	23.5	12.5	29.0		22.5	
3	10.5	6.5	---	---	17.0	9.5	22.5	12.0	---		27.0	
4	12.5	5.5	---	---	16.5	11.0	23.0	12.0	---		22.0	
5	12.0	7.5	---	---	15.0	9.5	23.0	11.5	---		26.5	
6	14.5	6.5	---	---	17.5	9.0	23.0	12.5	---		24.5	
7	12.5	6.5	---	---	16.5	10.0	24.0	12.5	---		23.0	
8	14.0	7.5	9.0	---	18.5	10.0	24.0	13.0	27.5		---	
9	9.5	6.0	13.0	5.0	19.5	10.5	23.5	13.5	27.0		21.0	
10	10.0	4.0	15.0	7.0	19.0	12.0	23.0	15.0	---		---	
11	13.5	5.5	12.5	8.0	20.0	11.5	22.5	15.5	---		---	
12	13.0	6.5	13.5	7.5	19.0	10.0	25.0	14.0	25.0		---	
13	10.0	6.0	15.0	6.5	20.5	11.0	25.0	13.5	23.0		20.0	
14	---	7.5	16.0	7.5	19.5	11.0	26.5	14.0	---		22.0	
15	---	---	15.5	8.0	21.0	12.0	23.0	15.5	20.0		---	
16	---	---	14.5	8.5	20.5	11.5	24.5	14.5	24.0		---	
17	---	---	11.5	8.0	20.5	11.5	23.5	16.0	24.5		---	
18	---	---	11.5	6.5	20.5	10.5	---	---	22.5		---	
19	---	---	13.0	7.0	21.5	12.5	24.0	16.0	23.0		---	
20	---	---	13.5	8.0	21.0	11.0	25.0	16.0	21.5		---	
21	---	---	12.5	9.5	22.5	12.0	26.0	15.5	25.5		---	
22	---	---	15.0	8.5	22.0	12.5	---	---	21.0		---	
23	---	---	14.0	9.0	22.5	13.5	26.5	---	26.0		---	
24	---	---	14.5	9.0	22.5	14.0	27.5	14.5	---		---	
25	---	---	12.5	8.5	22.5	14.5	27.0	15.0	---		---	
26	---	---	15.0	8.0	22.0	12.0	32.0	16.0	---		---	
27	---	---	12.0	9.0	22.5	13.0	32.0	16.0	23.5		---	
28	---	---	15.0	8.5	20.5	14.5	29.5	17.5	24.5		---	
29	---	---	16.0	9.0	20.0	13.5	27.5	---	24.5		---	
30	---	---	15.0	10.0	23.0	13.0	32.0	---	23.0		---	
31	---	---	13.0	9.0	---	---	---	---	---		---	

09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--CONTINUED

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.15	---	.01	5.1	159	1.7	4.8	89	1.4
2	.20	---	.02	5.0	200	2.2	6.1	28	.46
3	.20	---	.02	5.3	178	2.0	6.0	37	.60
4	.25	---	.05	5.3	199	2.2	6.2	26	.44
5	.75	---	.20	5.5	178	2.0	6.2	---	.45
6	1.0	---	.25	5.5	192	2.3	6.2	---	.45
7	3.9	---	2.5	5.7	161	1.9	6.1	27	.44
8	3.7	204	2.0	5.7	168	1.9	7.1	325	5.3
9	3.5	133	1.3	6.0	83	.92	9.9	167	2.6
10	3.5	100	.94	5.9	66	.73	8.9	263	3.9
11	3.5	105	.99	5.9	64	.67	9.2	259	3.5
12	3.5	35	.33	5.7	53	.53	9.2	114	1.4
13	3.7	38	.38	6.0	104	1.0	7.8	---	1.8
14	3.7	23	.23	6.0	63	.63	4.1	202	2.2
15	3.7	8	.08	6.2	54	.54	3.9	75	.79
16	3.5	21	.20	6.2	81	.81	3.7	200	2.0
17	3.5	63	.60	6.5	58	.58	3.5	---	3.0
18	3.7	57	.57	6.5	---	.47	3.3	543	4.8
19	3.7	135	1.3	7.3	169	1.8	3.3	495	4.4
20	3.7	137	1.4	5.6	---	2.0	3.3	645	5.7
21	3.9	122	1.3	4.5	174	1.9	3.3	---	3.9
22	4.1	145	1.6	4.1	154	1.7	3.7	---	3.4
23	4.1	158	1.7	4.4	88	1.0	3.9	153	1.6
24	4.1	97	1.1	4.4	26	.31	4.1	193	2.1
25	4.3	139	1.6	4.6	34	.42	4.4	136	1.6
26	4.3	144	1.7	4.7	69	.88	4.8	229	3.0
27	4.1	82	.91	5.0	87	1.2	5.0	---	3.0
28	4.4	87	1.0	5.0	50	.68	5.3	173	2.5
29	4.1	72	.79	5.3	83	1.2	7.3	58	.86
30	7.3	164	1.9	5.3	61	.87	7.5	35	.54
31	5.2	155	1.8	---	---	---	7.5	---	1.1
TOTAL	103.25	---	28.77	164.2	---	37.04	175.6	---	69.23

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09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--CONTINUED

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	7.5	135	2.1	6.2	---	1.6	9.9	2820	83
2	11	101	1.6	6.2	---	1.6	18	10000	547
3	9.2	---	1.5	6.0	---	1.5	10	---	65
4	8.1	84	1.3	6.1	---	1.6	13	9770	404
5	8.1	101	1.5	6.1	---	1.6	24	19500	1350
6	8.1	---	1.3	6.0	22	.36	20	17100	961
7	7.7	---	1.3	6.1	---	1.6	13	5400	201
8	7.2	---	1.4	6.1	88	1.4	10	2380	64
9	5.4	---	1.5	6.2	99	1.6	9.5	1640	42
10	6.1	59	.97	6.2	---	1.6	9.8	2380	76
11	6.2	38	.64	6.8	---	1.8	8.9	2560	62
12	6.2	91	1.5	6.7	109	2.0	10	1410	41
13	6.3	---	1.6	6.5	88	1.5	8.9	546	13
14	6.4	---	1.7	6.5	147	2.6	7.6	167	3.7
15	6.5	45	.79	6.5	89	1.6	8.0	132	2.9
16	6.5	33	.58	6.6	---	1.8	8.6	220	5.1
17	6.5	135	2.4	6.4	224	4.5	8.4	227	5.1
18	6.2	---	1.6	7.6	206	4.6	8.9	270	6.5
19	6.2	86	1.4	6.6	60	1.1	9.5	500	13
20	6.2	88	1.5	6.7	---	1.4	10	540	15
21	6.2	98	1.6	6.7	---	2.5	11	884	26
22	6.2	---	1.6	6.4	---	3.5	19	6000	384
23	6.2	202	3.4	6.2	237	4.0	14	1710	65
24	6.5	202	3.4	6.0	284	4.6	16	203	8.8
25	7.1	122	2.3	6.0	870	14	13	412	13
26	6.1	---	1.6	6.5	920	16	13	910	32
27	6.0	57	.92	9.4	---	3.2	13	1050	37
28	6.0	102	2.1	8.8	---	2.8	14	1550	59
29	6.2	98	1.6	---	---	---	14	926	35
30	6.1	155	2.7	---	---	---	16	1510	65
31	6.2	---	1.6	---	---	---	18	2220	108
TOTAL	209.8	---	51.00	184.1	---	87.96	387.0	---	4903.1

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09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--CONTINUED

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	34	4480	411	195	2840	1180	59	320	51
2	48	6350	806	205	2630	1460	50	280	38
3	48	4110	536	215	2900	1680	48	---	36
4	44	2500	297	230	2950	1830	44	230	27
5	42	1880	213	238	1890	1210	41	---	29
6	42	1360	154	232	1670	1050	43	604	70
7	46	2950	365	210	1480	839	39	544	57
8	57	4400	659	176	1230	584	36	351	34
9	69	5730	1020	150	1100	446	34	261	26
10	68	2780	510	140	930	352	32	358	31
11	65	2200	386	138	1240	462	30	157	13
12	71	3380	732	158	1290	550	28	168	13
13	82	4720	1020	190	1550	796	28	238	18
14	96	4010	1020	252	2140	1460	24	---	14
15	116	4520	1380	294	3030	2400	20	---	8.0
16	144	4570	1730	307	3410	2830	20	---	6.2
17	166	3460	1510	307	3130	2590	20	98	5.3
18	158	2740	1120	261	2160	1520	20	108	5.8
19	130	---	600	208	1580	887	19	70	3.6
20	124	---	550	176	1280	608	18	87	4.2
21	122	1680	556	164	1050	465	17	119	5.5
22	112	1680	508	158	1110	474	16	80	3.4
23	110	1320	392	140	1030	389	15	38	1.5
24	107	1260	364	130	890	312	14	116	4.4
25	106	1760	504	110	770	229	13	36	1.3
26	128	3610	1250	95	700	180	13	85	3.0
27	170	6100	2800	83	570	128	12	147	4.8
28	188	---	2800	76	500	103	11	74	2.2
29	190	4120	2110	71	470	90	12	128	4.1
30	186	---	1100	83	550	123	12	269	8.7
31	---	---	---	69	350	65	---	---	---
TOTAL	3069	---	27403	5461	---	27291	788	---	529.0

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09093500 PARACHUTE CREEK AT GRAND VALLEY, CO--CONTINUED

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	12	120	3.9	1.6	76	.25	1.4	86	.32
2	11	90	2.7	1.6	---	.26	2.0	288	1.6
3	10	66	1.8	1.2	72	.27	1.4	48	.18
4	9.8	---	1.6	1.2	47	.15	1.4	54	.20
5	9.4	138	3.6	1.0	67	.22	1.5	---	.25
6	9.5	164	4.2	1.0	34	.13	1.7	---	.30
7	9.5	139	3.6	.80	31	.12	1.8	170	.83
8	9.2	79	2.0	.80	42	.11	1.8	147	.71
9	9.2	42	1.0	.80	52	.14	1.5	62	.25
10	8.9	47	1.1	.80	66	.13	1.6	72	.31
11	8.9	27	.65	1.2	17	.03	1.4	41	.15
12	8.4	26	.59	1.0	---	.03	1.2	26	.08
13	8.1	21	.46	1.2	---	.03	1.2	44	.14
14	7.6	31	.64	1.4	---	.03	1.5	---	.25
15	7.3	25	.49	1.0	15	.03	1.8	---	.30
16	7.0	34	.64	.90	15	.04	2.2	---	.40
17	6.5	38	.67	.80	16	.04	2.4	---	.45
18	5.7	29	.45	.80	8	.02	2.6	---	1.3
19	4.8	78	1.0	.80	15	.05	2.8	176	1.3
20	4.1	62	.69	.60	14	.03	3.0	164	1.3
21	3.7	70	.70	.60	7	.01	2.8	---	1.1
22	3.1	46	.38	.56	22	.03	2.8	---	.85
23	2.9	41	.31	.56	8	.01	2.6	---	.60
24	2.4	51	.33	.56	5	.01	2.6	68	.48
25	2.2	34	.20	.56	16	.02	2.4	19	.12
26	2.0	30	.16	.56	12	.02	2.8	94	.71
27	1.7	44	.20	.56	8	.01	3.0	---	.80
28	1.6	50	.20	.56	8	.01	3.0	---	.90
29	1.7	60	.24	.72	37	.07	3.1	135	1.1
30	1.5	124	.40	.72	27	.05	3.1	97	.81
31	1.4	131	.42	.88	46	.11	---	---	---
TOTAL	191.5	---	35.32	27.34	---	2.48	64.4	---	18.09
YEAR	10825.19		60455.99						

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09093700 COLORADO RIVER NEAR DE BEQUE, CO

LOCATION.--Lat 39°21'45", long 108°09'07", in NE¼SW¼ sec.7, T.8 S., R.96 W., Mesa County, Hydrologic Unit 14010006, on left bank 3.0 mi (4.8 km) downstream from Alkali Creek and 3.8 mi (6.1 km) northeast of De Beque.

DRAINAGE AREA.--7,370 mi² (19,088 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,940 ft (1,506 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of about 158,000 acres (639 km²).

AVERAGE DISCHARGE.--12 years, 3,526 ft³/s (99.86 m³/s), 2,555,000 acre-ft/yr (3.150 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft³/s (637 m³/s) June 15, 1973, gage height, 11.07 ft (3.374 m); minimum daily, 914 ft³/s (25.9 m³/s) Dec. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,200 ft³/s (572 m³/s) at 2100 June 16, gage height, 10.85 ft (3.307 m); minimum daily, 914 ft³/s (25.9 m³/s) Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1310	1310	1240	1260	1400	2490	3670	10500	11200	2850	1650
2	1560	1360	1260	1060	1300	1530	2870	3610	10700	10500	2810	1650
3	1610	1320	1260	930	1240	1640	2740	3490	10900	9800	2710	1690
4	1630	1350	1360	1160	1280	1600	2600	3660	11300	9140	2500	1770
5	1590	1350	1410	1370	1360	1620	2500	3870	11400	8360	2390	1760
6	1440	1330	1370	1360	1330	1700	2480	3830	10600	7660	2250	1710
7	1780	1340	1240	1320	1370	1630	2440	3670	10600	7050	2120	1680
8	1770	1300	1240	1270	1430	1520	2470	3390	11200	6750	2040	1700
9	1780	1280	1320	1210	1390	1510	2690	3210	11600	6600	1940	1720
10	1780	1250	1150	1230	1370	1510	3140	3000	13500	6780	1910	1790
11	1710	1220	1240	1310	1420	1510	2820	3100	16300	6650	1890	1810
12	1680	1310	1260	1310	1380	1490	2690	3360	17600	6640	1940	1830
13	1640	1240	1250	1300	1360	1460	2710	3570	17500	6420	2170	1860
14	1570	1220	1240	1260	1310	1440	2720	4020	18100	5980	2230	1830
15	1530	1200	1290	1220	1310	1440	2790	5640	18500	5730	2370	1790
16	1530	1180	1350	1340	1320	1400	2860	7790	19400	5720	2340	1730
17	1530	1180	1310	1320	1300	1350	2920	9670	18900	5990	2210	1770
18	1360	1180	1110	1290	1170	1380	2910	9950	16700	6190	2140	1770
19	1270	1290	1230	1310	1170	1410	2750	8690	15200	5660	2010	1830
20	1260	1340	1140	1240	1250	1460	2620	7790	14700	5300	1910	1920
21	1270	1280	994	1300	1300	1520	2630	7850	14100	5010	1800	1950
22	1250	1140	914	1270	1350	1690	2620	8710	14000	4770	1760	1910
23	1280	1310	1020	1230	1280	1710	2590	9270	14400	4400	1830	1860
24	1300	1340	1320	1240	1300	1690	2570	10400	14700	4060	1860	1800
25	1300	1320	1440	1190	1290	1630	2580	11400	15200	3820	1850	1720
26	1290	1340	1380	1200	1320	1560	2700	11500	14800	3370	1840	1690
27	1270	1350	1270	1290	1410	1540	3240	11400	12800	3190	1840	1670
28	1250	1390	1250	1270	1420	1600	3870	11000	11700	3030	1780	1650
29	1250	1330	1290	1160	---	1700	3800	10100	11500	2910	1730	1640
30	1290	1330	1340	1240	---	1830	3670	9870	11500	2960	1660	1630
31	1370	---	1400	1330	---	2060	---	10400	---	2970	1660	---
TOTAL	45700	38680	38958	38770	36990	48530	84480	210880	419900	184610	64350	52780
MEAN	1474	1289	1257	1251	1321	1565	2816	6803	14000	5955	2076	1759
MAX	1780	1390	1440	1370	1430	2060	3870	11500	19400	11200	2850	1950
MIN	1250	1140	914	930	1170	1350	2440	3000	10500	2910	1660	1630
AC-FT	90650	76720	77270	76900	73370	96260	167600	418300	832900	366200	127700	104700

CAL YR 1977 TOTAL 610788 MEAN 1673 MAX 4580 MIN 914 AC-FT 1211000
WTR YR 1978 TOTAL 1264638 MEAN 3465 MAX 19400 MIN 914 AC-FT 2508000

09093700 COLORADO RIVER NEAR DE BEQUE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURE: August 1973 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,600 micromhos Nov. 9, 10, 1977; minimum daily, 270 micromhos May 30, 1974, June 12, 1978.
WATER TEMPERATURES: Maximum daily, 25.0°C July 1-4, 18-20, 1977; minimum daily, freezing point on many days during winter months each year.
SEDIMENT CONCENTRATIONS: Maximum daily, 2,090 mg/L Mar. 9, 1975; minimum daily, 2 mg/L Dec. 7, 17, 1975, Feb. 22, 1976.
SEDIMENT LOADS: Maximum daily, 41,300 tons (37,500 t) May 17, 1975; minimum daily, 8.4 tons (7.6 t) Feb. 22, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,600 micromhos Nov. 9, 10; minimum daily, 270 micromhos June 12.
WATER TEMPERATURES: Maximum daily, 24.0°C July 29; minimum daily, 1.0°C many days during December and January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
14...	1145	1570	1000	7.8	10.0	10.2	240	120	70
NOV									
18...	1215	1150	1420	7.2	5.0	10.4	340	170	95
DEC									
06...	1330	1350	1260	8.1	3.5	11.1	290	140	82
JAN									
23...	1130	1190	1270	7.7	2.0	11.8	280	150	80
MAR									
17...	1130	1370	1175	8.0	7.5	9.8	280	150	82
APR									
18...	1200	2910	740	8.2	9.0	9.1	220	94	62
MAY									
30...	1400	9830	380	8.1	14.0	8.3	130	32	38
JUN									
12...	1330	17400	270	8.0	12.5	8.8	110	32	31
JUL									
26...	1400	3290	640	8.3	21.5	8.2	180	78	54
AUG									
28...	1230	1740	950	8.5	20.0	7.4	230	110	68

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT									
14...	17	130	3.6	4.1	150	0	120	160	180
NOV									
18...	24	180	4.3	5.1	200	0	160	180	260
DEC									
06...	20	150	3.9	4.7	180	0	150	160	210
JAN									
23...	20	150	3.9	4.5	160	0	130	130	230
MAR									
17...	19	140	3.6	4.4	160	0	130	170	190
APR									
18...	15	68	2.0	3.0	150	0	120	100	90
MAY									
30...	8.6	25	1.0	1.7	120	0	98	43	31
JUN									
12...	6.7	14	.6	1.3	95	0	78	37	18
JUL									
26...	12	66	2.1	2.8	130	0	110	88	92
AUG									
28...	15	120	3.4	3.7	140	3	120	120	170

09093700 COLORADO RIVER NEAR DE BEQUE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT									
14...	.3	6.8	642	.87	2720	.01	.01	40	10
NOV									
18...	.3	7.7	851	1.16	2640	.03	.01	40	40
DEC									
06...	.1	8.1	724	.98	2640	.05	.00	40	40
JAN									
23...	.3	8.3	703	.96	2260	.23	.00	20	30
MAR									
17...	.3	8.4	694	.94	2570	.18	.02	20	20
APR									
18...	.2	9.2	423	.58	3320	.33	.01	50	10
MAY									
30...	.2	8.4	216	.29	5730	.15	.01	70	10
JUN									
12...	.1	7.6	163	.22	7660	.16	.00	20	20
JUL									
26...	.2	7.8	387	.53	3440	.01	.01	30	0
AUG									
28...	.3	9.0	578	.79	2720	.02	.00	210	0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	1400	1400	1250			1050			380	800	1200
2	1200	1400	1400	1250			1000			380	800	1200
3	1200	1400	1400	1250			1000			400	850	1200
4	1200	1400	1400	1250			850			425	900	1200
5	1200	1400	1300	1250			900			425	900	1200
6	1200	---	1300	1250			900			450	900	1200
7	1200	1500	1300	1250			950			500	1000	1200
8	1200	1500	1300	1200			900			500	---	1200
9	1200	1600	1300	1200			900			520	1000	1200
10	1200	1600	1250	1250			800			520	1000	1200
11	1200	1550	1300	1250			800			500	1000	1200
12	1200	---	1300	1250			800			510	1000	1200
13	1200	---	1300	1250			800			520	1000	1200
14	1250	---	1300	1200			800			470	1000	1200
15	1300	---	1300	1200			800			480	1050	1200
16	1300	1500	1300	1200			800			480	1100	1200
17	1250	1500	1200	---			800			540	1100	1200
18	1250	1500	1200	---			800			520	1150	1200
19	1300	1500	1350	1200			850			510	1200	1200
20	1300	---	1350	1300			850			---	1200	1200
21	1300	---	1300	1300			850			---	1200	1100
22	1300	1400	1300	1300			800			780	1200	1100
23	1300	1400	---	1300			800			---	1200	1100
24	1300	1300	1300	1300			800			---	1200	1050
25	1300	1300	---	---			800			---	1200	1000
26	1300	1300	---	---			800			---	1200	1100
27	1300	1300	1250	1250			800			---	1200	1200
28	1300	1300	1250	1250			800			---	1200	1300
29	1300	1300	1250	---			800			---	1200	1300
30	1300	1300	---	1200			800			---	1200	1300
31	1400	---	1250	1200			---			---	1200	---

09093700 COLORADO RIVER NEAR DE BEQUE, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	6.0	6.0	1.0			13.0			17.0	22.0	19.0
2	16.0	6.0	6.0	1.0			12.0			17.0	21.0	20.0
3	16.0	6.0	6.0	1.0			12.0			17.0	21.0	21.0
4	16.0	6.0	6.0	1.0			12.0			18.0	21.0	21.0
5	15.0	10.0	6.0	1.0			12.0			18.0	22.0	21.0
6	14.0	---	6.0	1.0			13.0			18.0	22.0	21.0
7	14.0	7.0	5.0	1.0			13.0			18.0	22.0	21.0
8	14.0	7.0	5.0	1.0			13.0			18.0	---	22.0
9	14.0	5.0	5.0	1.0			13.0			18.0	22.0	22.0
10	14.0	3.0	3.0	2.0			12.0			18.0	22.0	21.0
11	13.0	6.0	4.0	2.0			13.0			18.0	22.0	19.0
12	13.0	---	5.0	2.0			13.0			19.0	22.0	18.0
13	13.0	---	5.0	2.0			13.0			20.0	22.0	16.0
14	11.0	---	4.0	2.0			13.0			22.0	22.0	16.0
15	11.0	---	4.0	2.0			13.0			20.0	22.0	16.0
16	11.0	7.0	3.0	4.0			13.0			20.0	22.0	15.0
17	10.0	7.0	2.0	---			13.0			18.0	22.0	14.0
18	10.0	7.0	1.0	---			12.0			18.0	22.0	13.0
19	10.0	6.0	1.0	4.0			11.0			19.0	22.0	13.0
20	10.0	---	1.0	2.0			10.0			21.0	22.0	12.0
21	9.0	---	1.0	2.0			10.0			---	22.0	11.0
22	9.0	6.0	1.0	2.0			10.0			22.0	20.0	15.0
23	8.0	6.0	---	2.0			10.0			22.0	20.0	15.0
24	8.0	6.0	1.0	2.0			10.0			---	20.0	16.0
25	7.0	6.0	---	---			13.0			21.0	20.0	16.0
26	7.0	6.0	---	---			13.0			22.0	20.0	16.0
27	7.0	5.0	1.0	3.0			13.0			22.0	20.0	16.0
28	7.0	5.0	1.0	3.0			13.0			23.0	20.0	16.0
29	7.0	5.0	1.0	---			13.0			24.0	20.0	16.0
30	7.0	5.0	---	4.0			12.0			---	18.0	16.0
31	6.0	---	1.0	4.0			---			---	18.0	---

09093700 COLORADO RIVER NEAR DE BEQUE, CO--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
06...	1315	1350	45	164
JAN				
23...	1115	1190	43	138
MAR				
17...	1110	1370	143	529
APR				
18...	1345	2820	468	3560
MAY				
30...	1320	9830	394	10500
JUN				
12...	1305	17400	1020	47900
JUL				
26...	1330	3290	32	284
AUG				
28...	1215	1760	59	280

ROAN CREEK BASIN

09095000 ROAN CREEK NEAR DE BEQUE, CO

LOCATION.--Lat 39°27'12", long 108°18'59", in NE¼NW¼ sec.15, T.7 S., R.98 W., Garfield County, Hydrologic Unit 14010006, on left bank 5.0 ft (2 m) downstream from bridge, 0.7 mi (1.1 km) downstream from Kimball Creek, and 10 mi (16 km) northwest of De Beque.

DRAINAGE AREA.--321 mi² (831 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to September 1926, October 1962 to September 1972, October 1974 to current year.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,380 ft (1,640 m), from topographic map. Prior to October 1962, nonrecording gage at different datum.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. Diversions above station for irrigation of about 2,800 acres (11.3 km²) above and about 570 acres (2.31 km²) below station.

AVERAGE DISCHARGE.--19 years (water years 1922-26, 196372, 1975-78), 36.8 ft³/s (1.042 m³/s), 26,660 acre-ft/yr (32.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) Sept. 19, 1972, gage height, 7.07 ft (2.155 m), from rating curve extended above 130 ft³/s (3.7 m³/s), on basis of slope-area measurements at gage heights 4.30 and 6.09 ft (1.311 and 1.856 m); maximum gage height, 7.72 ft (2.353 m) Aug. 25, 1977; minimum daily discharge, 3.2 ft³/s (0.091 m³/s) Nov. 25, 1963, but may have been less during periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 7	0230	188	5.32	7.04	2.146	May 17	1130	*704	19.9	7.54	2.298

Minimum daily discharge, 5.0 ft³/s (0.142 m³/s) Oct. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.4	5.8	7.7	7.8	17	59	213	140	38	18	8.5
2	7.8	5.6	6.8	7.4	7.8	22	88	232	130	35	17	8.5
3	7.8	5.7	7.0	7.4	7.8	21	71	256	109	34	18	11
4	7.4	5.7	7.2	7.9	8.1	21	62	290	93	34	17	13
5	7.4	5.6	7.2	8.0	8.0	29	65	315	93	34	16	14
6	7.0	6.0	6.4	7.4	7.6	30	64	315	93	32	16	14
7	32	6.2	6.6	6.9	7.9	27	68	270	91	31	15	14
8	9.0	5.7	6.8	6.8	8.0	27	78	244	89	30	14	15
9	7.6	5.1	6.0	7.0	8.0	26	85	210	88	25	14	15
10	5.8	5.1	7.2	7.8	9.2	24	78	206	86	24	15	15
11	6.1	5.7	7.2	7.8	11	23	78	220	83	24	15	13
12	6.1	5.7	7.8	7.4	10	26	89	275	77	24	16	14
13	6.2	6.0	7.4	7.0	10	23	93	335	69	23	17	14
14	6.2	6.6	7.8	6.8	11	21	96	450	65	23	17	13
15	6.3	6.4	8.0	7.8	11	16	102	547	60	24	16	14
16	6.5	6.4	8.0	7.8	11	16	109	624	55	24	16	14
17	6.4	6.2	6.6	7.8	11	18	117	659	55	22	16	14
18	6.5	6.4	9.0	7.8	15	19	109	575	59	22	18	14
19	6.6	6.2	8.6	7.8	12	21	105	426	51	23	17	13
20	6.7	5.7	7.7	7.8	13	24	104	300	50	22	18	12
21	6.0	5.4	7.2	7.8	12	26	113	295	50	22	18	12
22	5.4	5.8	7.2	7.6	12	29	104	305	49	20	17	12
23	5.2	5.8	7.4	7.6	12	31	96	265	48	20	16	12
24	5.2	6.0	7.8	7.6	12	33	102	240	46	20	16	10
25	5.1	5.7	7.5	7.2	13	30	102	206	41	20	15	11
26	5.2	5.7	7.0	7.6	13	30	115	176	39	20	15	11
27	5.0	5.6	7.2	8.2	14	31	161	170	36	20	13	10
28	5.0	6.0	7.6	7.7	13	32	206	164	32	21	11	10
29	5.0	5.8	8.0	7.4	---	35	216	155	34	20	11	10
30	5.2	6.4	8.2	7.1	---	36	224	152	38	20	10	10
31	5.2	---	7.9	7.5	---	40	---	152	---	18	9.2	---
TOTAL	220.7	175.6	228.1	233.4	296.2	804	3159	9242	2049	769	477.2	371.0
MEAN	7.12	5.85	7.36	7.53	10.6	25.9	105	298	68.3	24.8	15.4	12.4
MAX	32	6.6	9.0	8.2	15	40	224	659	140	38	18	15
MIN	5.0	5.1	5.8	6.8	7.6	16	59	152	32	18	9.2	8.5
AC-FT	438	348	452	463	588	1590	6270	18330	4060	1530	947	736

CAL YR 1977 TOTAL 3624.2 MEAN 9.93 MAX 88 MIN 4.5 AC-FT 7190
WTR YR 1978 TOTAL 18025.2 MEAN 49.4 MAX 659 MIN 5.0 AC-FT 35750

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1975 to current year.
WATER TEMPERATURE: February 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: March 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1975. Pumping sediment sampler since March 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,480 micromnos Sept. 19, 1975; minimum daily, 460 micromhos May 27, 1978.
WATER TEMPERATURES: Maximum daily, 29.0°C several days during July 1977; minimum daily, freezing point on many days during winter months most years.
SEDIMENT CONCENTRATIONS: Maximum daily, 47,900 mg/L Aug. 25, 1977; minimum daily, 5 mg/L, estimated Sept. 28-30, 1978.
SEDIMENT LOADS: Maximum daily, 12,600 tons (11,400 t) Aug. 25, 1977; minimum daily, 0.14 ton (0.13 t), estimated Sept. 28-30, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,510 micromhos July 16; minimum, 460 micromhos May 27.
WATER TEMPERATURES: Maximum, 24.0°C several days during July; minimum, 1.0°C many days during January and February.
SEDIMENT CONCENTRATIONS: Maximum daily, 9,120 mg/L Apr. 2; minimum daily,, 5 mg/L estimated Sept. 28-30.
SEDIMENT LOADS: Maximum daily, 12,500 tons (11,300 t) May 15; minimum daily, 0.14 ton (0.13 t), estimated Sept. 28-30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT												
21...	1300	5.4	1260	8.4	13.0	11.8	520	110	70	83	110	2.1
NOV												
29...	1550	6.0	1230	8.5	5.0	10.2	530	83	83	79	140	2.6
DEC												
20...	1400	8.7	1150	8.2	1.0	11.0	480	91	76	69	110	2.2
FEB												
09...	1215	7.4	1080	8.4	4.0	10.6	450	40	74	64	100	2.1
MAR												
07...	1100	18	1300	8.4	7.0	9.1	510	130	89	69	120	2.3
APR												
03...	1315	72	900	8.3	9.5	8.7	380	61	68	51	85	1.9
MAY												
09...	1100	204	710	8.2	6.5	9.4	300	0	57	39	55	1.4
JUN												
06...	1115	102	900	8.2	12.0	8.2	400	0	71	53	85	1.9
JUL												
12...	1200	25	1310	8.1	18.5	7.3	560	130	89	82	140	2.6
AUG												
21...	1400	17	1240	8.3	20.5	11.0	500	--	81	73	140	2.7

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
21...	4.0	480	8	410	310	9.2	.7	14	848	.04	.00	3
NOV												
29...	3.6	550	0	450	340	10	.8	16	947	.17	.01	3
DEC												
20...	3.5	470	0	390	270	10	.9	17	793	.56	.01	2
FEB												
09...	3.3	500	0	410	230	16	.8	17	756	.49	.01	3
MAR												
07...	4.2	460	0	380	340	9.0	.8	17	883	1.0	.02	3
APR												
03...	3.1	390	0	320	210	6.9	.6	15	638	1.1	.01	3
MAY												
09...	2.1	370	0	300	--	5.1	.5	16	--	1.2	.00	2
JUN												
06...	2.8	490	0	400	180	6.2	.6	17	663	.93	.01	3
JUL												
12...	4.2	530	0	430	350	17	.8	17	968	1.0	.03	4
AUG												
21...	3.4	--	0	--	--	9.6	.7	15	--	.40	.00	3

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT												
21...	100	260	0	1	30	1	40	40	.0	4	1200	0
NOV												
29...	400	240	0	1	20	0	60	60	.0	1	1400	0
DEC												
20...	0	220	0	0	20	2	50	40	.0	3	2000	20
FEB												
09...	300	200	1	1	10	5	50	40	.0	3	1200	10
MAR												
07...	100	210	2	3	10	0	60	40	.0	4	1200	10
APR												
03...	100	160	2	4	30	19	40	20	.0	2	1000	10
MAY												
09...	100	100	1	0	20	2	20	20	.0	0	770	10
JUN												
06...	200	150	1	2	10	0	20	10	.0	2	990	10
JUL												
12...	200	240	1	2	10	1	50	20	.1	3	1600	0
AUG												
21...	200	250	1	1	50	3	40	10	.0	3	1300	10

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	997	1200	1380	1210	1220	1150	907	803	664	1320	1420	1330
2	845	1230	1380	1260	1220	1130	858	800	700	1330	1340	1290
3	1040	1250	1350	1240	1220	1120	922	744	810	1320	1310	1270
4	947	1280	1350	1200	1210	1190	921	638	845	1310	1310	1260
5	952	1290	1330	1180	1220	1150	874	634	862	1300	1360	1280
6	892	1280	1330	1180	1200	1180	721	667	729	1320	1350	1280
7	910	1260	1330	1190	1190	1180	602	664	898	1320	1270	1260
8	862	1270	1300	1230	1150	1120	570	600	964	1320	1220	1270
9	894	1290	1330	1250	1080	1110	526	550	970	1290	1200	1310
10	824	1330	1330	1230	1150	1100	524	528	983	1330	1190	1300
11	779	1340	1300	1200	1120	1100	541	631	1030	1340	1190	1340
12	790	1330	1270	1200	1120	1090	751	608	1070	1380	1170	1320
13	805	1330	1260	1200	1150	1100	749	503	1100	1390	1140	1310
14	821	1320	1240	1220	1180	1100	743	487	1120	1440	1130	1330
15	839	1310	1220	1190	1180	1100	721	501	1140	1440	1160	1330
16	857	1310	1200	1180	1180	1110	702	586	1150	1470	1170	1340
17	866	1310	1240	1170	1190	1100	721	602	1140	1450	1180	1380
18	878	1330	1230	1180	1230	1100	763	607	1160	1410	1190	1370
19	888	1340	1090	1180	1230	1080	777	641	1270	1400	1200	1350
20	893	1350	1170	1170	1220	1040	788	728	1300	1410	1210	1360
21	925	1360	1270	1170	1210	1020	791	688	1300	1410	1250	1380
22	956	1370	1230	1140	1200	1010	809	570	1290	1400	1280	1320
23	990	1380	1220	1170	1180	1010	827	689	1290	1360	1280	1270
24	1010	1380	1200	1160	1150	1120	836	696	1310	1300	1280	1290
25	1040	1390	1190	1170	1130	986	840	521	1320	1280	1280	1310
26	1060	1400	1200	1190	1140	952	828	553	1330	1280	1280	1340
27	1090	1410	1210	1200	1130	945	787	502	1300	1260	1300	1390
28	1120	1420	1180	1230	1140	941	789	560	1250	1280	1310	1410
29	1140	1420	1170	1240	---	943	810	607	1300	1290	1300	1410
30	1150	1390	1170	1230	---	952	806	614	1340	1340	1310	1390
31	1160	---	1160	1230	---	958	---	635	---	1400	1330	---

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	1.5	8.5	3.5	6.0	3.0	3.0	1.5	8.0	3.0	6.5	5.0
2	18.0	2.0	9.0	3.5	7.0	4.0	2.5	1.5	6.5	2.5	8.5	4.5
3	20.0	3.0	10.5	4.0	8.0	5.5	4.5	2.0	6.5	2.5	4.5	1.5
4	20.0	7.0	12.0	4.5	8.5	5.5	4.0	2.0	5.5	1.0	8.0	3.0
5	20.0	6.5	12.0	5.5	7.5	4.0	5.5	3.0	4.5	1.0	6.5	4.5
6	16.5	6.0	10.5	8.5	6.0	3.0	5.0	3.5	6.5	2.0	8.0	4.5
7	17.5	5.0	12.0	7.0	6.0	3.0	5.5	2.0	7.5	4.5	10.5	4.0
8	17.0	3.0	8.0	3.5	6.0	3.0	3.5	1.0	6.5	3.5	9.5	2.5
9	16.5	3.0	7.0	2.0	5.0	2.5	4.5	2.0	5.0	2.0	9.5	3.0
10	16.0	3.0	7.5	2.0	6.0	3.0	5.0	3.0	6.5	3.0	9.0	4.0
11	15.0	2.5	8.0	2.5	6.0	3.0	6.0	3.5	5.5	3.5	9.5	4.0
12	15.0	1.5	9.0	4.0	6.0	3.5	6.5	3.5	6.0	2.0	7.5	5.5
13	15.5	1.5	8.5	4.0	5.5	3.0	5.0	2.0	6.5	2.0	8.5	4.5
14	17.0	5.5	9.0	4.0	6.0	3.5	4.0	1.5	7.5	3.0	8.0	3.5
15	18.0	3.0	9.5	4.5	6.5	4.0	4.0	2.0	6.5	2.5	8.5	1.5
16	18.0	2.5	9.0	4.0	6.0	3.5	6.5	3.5	6.0	1.5	10.5	1.0
17	17.5	2.5	7.0	4.0	5.0	2.5	5.5	3.0	4.0	1.0	12.0	2.5
18	17.5	4.0	---	---	4.5	2.5	7.0	3.5	3.0	1.0	12.5	3.5
19	17.0	5.0	---	---	4.0	2.0	5.5	2.5	5.0	1.0	10.0	5.0
20	17.0	3.0	---	---	2.5	1.5	6.0	3.0	6.5	2.0	15.0	6.5
21	15.5	4.5	---	---	3.0	1.5	6.5	3.0	7.5	1.5	14.5	5.5
22	16.0	8.5	---	---	3.5	1.5	5.5	2.5	7.5	1.0	9.0	5.5
23	14.5	7.0	---	---	3.5	2.0	4.5	2.0	7.5	1.5	12.0	4.5
24	12.0	6.5	---	---	4.5	2.0	4.0	1.0	7.5	1.5	10.0	6.5
25	14.5	6.0	---	---	4.5	2.0	4.5	1.0	8.0	3.0	13.5	4.0
26	14.5	6.5	---	---	4.5	1.5	4.5	1.0	9.0	[illegible]	15.0	4.5
27	14.5	6.5	---	---	4.5	2.5	5.0	1.5	8.5	5.0	16.0	6.0
28	14.5	6.5	---	---	6.0	4.0	3.5	1.0	9.0	3.5	15.5	7.0
29	13.0	7.5	---	---	5.5	4.0	5.5	1.5	---	---	16.5	6.5
30	13.5	8.0	7.0	4.0	5.0	4.5	4.5	1.0	---	---	15.5	6.5
31	7.5	5.5	---	---	5.0	1.5	5.0	2.0	---	---	16.0	7.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	7.5	12.0	6.5	14.5	9.0	22.5	11.0	21.5	13.0	21.0	12.0
2	9.5	6.0	14.0	7.0	16.0	10.0	22.5	10.5	21.5	12.5	21.5	12.0
3	11.5	6.5	13.0	7.5	18.5	9.5	21.5	10.0	22.5	12.5	21.5	12.0
4	13.5	5.0	10.0	6.5	16.5	10.5	21.5	10.0	22.0	12.0	21.0	12.0
5	12.5	7.5	8.5	6.5	14.0	10.0	22.0	9.5	22.5	11.5	21.5	12.0
6	15.0	6.0	7.5	6.0	18.0	8.5	22.0	11.0	22.0	12.0	---	---
7	13.0	7.0	8.5	6.5	16.5	9.5	22.5	11.0	23.0	13.0	---	---
8	14.0	7.5	---	---	19.0	9.5	22.0	10.5	22.0	13.0	20.5	12.0
9	9.5	6.0	---	---	20.0	10.0	22.0	11.0	21.0	14.0	20.5	11.5
10	11.5	3.5	14.5	7.5	19.0	11.0	22.0	12.5	21.5	14.0	18.0	12.0
11	15.0	5.5	14.0	8.5	20.5	10.5	21.0	13.0	23.0	14.0	19.0	12.0
12	14.5	6.5	15.5	7.5	19.5	9.5	23.0	12.0	21.0	15.0	18.0	9.0
13	11.5	6.0	16.0	6.5	20.5	9.5	22.5	10.0	19.5	15.0	17.5	8.0
14	12.5	7.0	15.0	8.5	20.0	9.5	23.0	11.0	18.5	13.5	16.0	8.5
15	13.5	7.0	14.0	9.5	21.0	10.0	20.0	12.0	20.5	9.5	18.0	9.5
16	9.5	6.0	13.5	9.5	21.0	9.5	21.5	12.0	21.5	10.5	19.0	10.0
17	9.0	4.0	11.5	7.5	21.0	10.0	22.5	12.5	21.5	11.0	17.5	12.5
18	11.5	2.5	12.5	6.0	19.5	9.5	22.5	12.0	20.0	10.5	13.5	10.0
19	12.0	4.0	14.0	6.5	21.5	11.0	21.5	13.0	20.5	9.5	14.0	8.0
20	14.0	5.0	14.0	8.0	21.5	10.0	23.0	12.5	20.0	11.5	15.0	6.5
21	10.5	6.0	12.5	10.0	22.0	10.5	21.5	12.0	21.5	13.0	15.0	6.5
22	10.0	2.5	15.0	8.0	22.5	10.5	23.0	11.0	19.5	15.5	17.5	7.0
23	13.5	4.0	14.5	8.5	22.0	11.0	23.0	11.0	21.5	13.0	18.5	8.5
24	14.0	5.5	15.0	8.5	23.0	13.0	23.5	11.5	21.5	11.5	17.5	9.5
25	13.5	8.0	13.5	8.0	22.5	13.0	22.0	12.0	20.0	11.5	19.0	10.0
26	15.0	8.0	15.0	7.5	22.0	10.5	24.0	13.0	21.0	11.0	18.5	9.5
27	11.5	8.0	13.5	9.0	21.0	11.0	24.0	12.0	20.5	10.5	18.0	9.5
28	11.5	6.5	15.5	9.0	18.0	12.5	22.5	14.5	21.0	11.5	18.0	9.5
29	11.5	7.0	16.5	8.5	19.0	11.5	21.0	14.5	20.5	11.5	18.5	9.5
30	11.5	7.0	15.0	10.5	22.5	11.0	24.0	13.5	21.0	11.5	17.5	9.0
31	---	---	13.0	10.0	---	---	19.5	12.5	20.0	12.0	---	---

09095000 ROAN CREEK NEAR DE BEQUE, CO-Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	7.8	---	.70	5.4	---	.75	5.8	---	.95
2	7.8	---	.70	5.6	---	.75	6.8	---	1.1
3	7.8	---	.70	5.7	---	.75	7.0	63	1.2
4	7.4	---	.65	5.7	---	.75	7.2	43	.84
5	7.4	---	.65	5.6	---	.75	7.2	37	.72
6	7.0	---	.60	6.0	---	.80	6.4	258	4.5
7	32	---	110	6.2	---	.85	6.6	107	1.9
8	9.0	---	3.0	5.7	---	.75	6.8	66	1.2
9	7.6	---	1.5	5.1	---	.70	6.0	68	1.1
10	5.8	---	.60	5.1	---	.70	7.2	86	1.7
11	6.1	---	.70	5.7	---	.75	7.2	61	1.2
12	6.1	---	.70	5.7	---	.75	7.8	37	.78
13	6.2	---	.70	6.0	---	.80	7.4	41	.82
14	6.2	---	.70	6.6	---	.90	7.8	63	1.3
15	6.3	---	.75	6.4	---	.85	8.0	52	1.1
16	6.5	---	.75	6.4	---	.85	8.0	59	1.3
17	6.4	---	.75	6.2	---	.85	6.6	44	.78
18	6.5	---	.75	6.4	---	.85	9.0	39	.95
19	6.6	---	.75	6.2	---	.85	8.6	78	1.8
20	6.7	---	.75	5.7	---	.75	7.7	124	2.6
21	6.0	43	.70	5.4	---	.75	7.2	133	2.6
22	5.4	42	.61	5.8	---	.80	7.2	65	1.3
23	5.2	59	.83	5.8	---	.80	7.4	---	1.2
24	5.2	42	.59	6.0	118	1.9	7.8	74	1.6
25	5.1	27	.37	5.7	82	1.3	7.5	86	1.7
26	5.2	18	.25	5.7	69	1.1	7.0	---	1.7
27	5.0	28	.38	5.6	24	.36	7.2	90	1.7
28	5.0	41	.55	6.0	38	.62	7.6	---	1.8
29	5.0	---	.80	5.8	48	.75	8.0	---	1.9
30	5.2	91	1.3	6.4	62	1.1	8.2	---	2.0
31	5.2	---	.70	---	---	---	7.9	---	1.9
TOTAL	220.7	---	133.48	175.6	---	25.23	228.1	---	47.26

09095000 ROAN CREEK NEAR DE BEQUE, CO–Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	7.7	---	1.9	7.8	---	2.1	17	3050	140
2	7.4	---	1.8	7.8	---	2.1	22	1300	77
3	7.4	---	1.8	7.8	---	2.1	21	600	34
4	7.9	---	1.9	8.1	---	2.2	21	1800	102
5	8.0	---	1.9	8.0	---	2.2	29	2150	168
6	7.4	---	1.8	7.6	---	1.8	30	1550	126
7	6.9	---	1.7	7.9	---	1.9	27	1460	106
8	6.8	---	1.6	8.0	---	2.2	27	1210	88
9	7.0	---	1.7	8.0	165	3.6	26	880	62
10	7.8	92	1.9	9.2	1020	25	24	620	40
11	7.8	---	1.9	11	688	20	23	670	42
12	7.4	86	1.7	10	432	12	26	460	32
13	7.0	80	1.5	10	---	11	23	355	22
14	6.8	110	2.0	11	---	11	21	380	22
15	7.9	131	2.8	11	---	11	16	390	17
16	7.8	134	2.8	11	---	11	16	400	17
17	7.8	105	2.2	11	---	11	18	345	17
18	7.8	122	2.6	15	---	40	19	465	24
19	7.8	94	2.0	12	---	25	21	445	25
20	7.8	102	2.1	13	---	30	24	635	41
21	7.8	92	1.9	12	---	25	26	840	59
22	7.6	92	1.9	12	---	22	29	---	60
23	7.6	101	2.1	12	---	22	31	1620	136
24	7.6	103	2.1	12	672	22	33	2380	212
25	7.2	114	2.2	13	842	30	30	400	32
26	7.6	81	1.7	13	1070	38	30	245	20
27	8.2	87	1.9	14	1240	47	31	370	31
28	7.7	126	2.9	13	1940	68	32	698	60
29	7.4	---	1.8	---	---	---	35	1010	95
30	7.1	---	1.7	---	---	---	36	1320	128
31	7.5	---	2.0	---	---	---	40	1540	166
TOTAL	233.4	---	61.8	296.2	---	501.2	804	---	2201

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	59	4800	765	213	3320	1910	140	1070	404
2	89	9120	2170	232	3300	2070	130	900	316
3	71	3050	585	256	3000	2070	109	942	277
4	62	2130	357	290	3460	2710	93	---	230
5	65	2000	351	315	1930	1640	93	---	230
6	64	1450	251	315	1850	1570	93	900	226
7	68	1250	229	270	---	1300	91	800	197
8	78	1920	404	244	---	1200	89	748	180
9	85	1900	436	210	2200	1250	88	692	164
10	78	1100	232	206	1850	1030	86	637	148
11	78	1120	236	220	1770	1050	83	767	172
12	89	1670	401	275	1930	1430	77	598	124
13	93	2000	502	335	3980	3600	69	538	100
14	96	2050	531	450	---	7500	65	624	110
15	102	2400	661	547	8450	12500	60	465	75
16	109	2900	853	624	5900	9940	55	476	71
17	117	2390	755	659	---	7100	55	422	63
18	109	1850	544	575	4600	7140	59	533	85
19	105	1720	488	426	---	5000	51	390	54
20	104	1590	446	300	4180	3390	50	455	61
21	113	1650	503	295	---	2900	50	438	59
22	104	1250	351	305	3740	3080	49	362	48
23	96	1150	298	265	3900	2790	48	516	67
24	102	1270	350	240	3340	2160	46	450	56
25	102	1320	364	206	2750	1530	41	342	38
26	115	1880	584	176	2100	998	39	354	37
27	161	4500	1960	170	1730	794	36	360	35
28	206	4480	2490	164	1460	646	32	291	25
29	216	3490	2040	155	1250	523	34	314	29
30	224	2920	1770	152	1070	439	38	506	52
31	---	---	---	152	894	367	---	---	---
TOTAL	3159	---	21907	9242	---	91627	2049	---	3733

09095000 ROAN CREEK NEAR DE BEQUE, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	38	434	45	18	230	11	8.5	8	.18
2	35	263	25	17	197	9.0	8.5	8	.18
3	34	345	32	18	196	9.5	11	---	.35
4	34	345	32	17	230	11	13	---	.50
5	34	390	36	16	214	9.2	14	---	.55
6	32	318	27	16	244	11	14	---	.60
7	31	313	26	15	---	7.5	14	---	.65
8	30	291	24	14	142	5.4	15	---	.70
9	25	369	25	14	140	5.3	15	---	.65
10	24	173	11	15	110	4.5	15	---	.65
11	24	---	13	15	117	4.7	13	---	.60
12	24	230	15	16	112	4.8	14	20	.76
13	23	319	20	17	108	5.0	14	16	.60
14	23	322	20	17	102	4.7	13	---	.50
15	24	318	21	16	55	2.4	14	---	.55
16	24	337	22	16	41	1.8	14	---	.60
17	22	309	18	16	80	3.5	14	---	.55
18	22	255	15	18	---	2.5	14	---	.60
19	23	302	19	17	---	2.5	13	---	.50
20	22	266	16	18	40	1.9	12	---	.35
21	22	261	16	18	22	1.1	12	---	.35
22	20	249	13	17	30	1.4	12	---	.35
23	20	260	14	16	35	1.5	12	---	.35
24	20	310	17	16	15	.65	10	---	.20
25	20	265	14	15	10	.41	11	---	.25
26	20	340	18	15	7	.28	11	---	.25
27	20	312	17	13	9	.32	10	---	.20
28	21	---	18	11	9	.27	10	---	.14
29	20	---	16	11	11	.33	10	---	.14
30	20	---	16	10	12	.32	10	---	.14
31	18	213	10	9.2	8	.20	---	---	---
TOTAL	769	---	631	477.2	---	123.98	371.0	---	12.99
YEAR	18025.2		121004.92						

09095400 DRY FORK NEAR DE BEQUE, CO

LOCATION.--Lat 39°22'08", long 108°15'41", in SE¼SW¼ sec.7, T.8 S., R.97 W., Garfield County, Hydrologic Unit 14010006, on right bank 0.4 mi (0.6 km) upstream from mouth and 3.4 mi (5.5 km) northwest of De Beque.

DRAINAGE AREA.--109 mi² (282 km²).

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR CO-76-2: 1975(M).

GAGE.--Water-stage recorder. Altitude of gage is 5,085 ft (1,550 m), from topographic map.

REMARKS.--Records fair with estimated periods poor. Diversions above station for irrigation of hay meadows. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 784 ft³/s (22.2 m³/s) Oct. 27, 1974, gage height, 7.11 ft (2.167 m), from floodmarks, from rating curve extended above 47 ft³/s (1.3 m³/s), on basis of slope-area measurement of peak flow at gage height 6.93 ft (2.112 m); no flow Aug. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 242 ft³/s (6.85 m³/s) at 0800 Oct. 6, gage height, 5.04 ft (1.536 m), only peak above base of 50 ft³/s (1.4 m³/s); minimum daily, 0.02 ft³/s (0.001 m³/s) Jan. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.18	.32	.16	.03	14	28	9.4	4.8	3.5	.58	1.6
2	.17	.14	.38	.10	.03	46	22	14	4.0	2.7	.51	1.6
3	.19	.11	.45	.07	.05	34	17	17	1.5	2.3	.51	1.4
4	.23	.10	.50	.04	.04	21	6.8	17	1.4	2.1	.51	1.4
5	.25	.25	.56	.03	.03	40	6.8	19	1.5	3.0	.58	1.6
6	35	.57	.33	.02	.03	34	4.0	22	1.5	4.7	.58	4.5
7	.22	.20	.24	.03	.04	20	4.0	19	1.6	4.4	.58	2.4
8	.20	.13	.18	.03	.04	21	3.2	17	1.6	3.8	.56	3.2
9	.18	.11	.20	.03	.04	41	3.0	15	1.5	3.8	.54	2.2
10	.17	.08	.18	.03	.05	38	2.8	14	1.6	3.7	.50	2.1
11	.17	.06	.21	.03	.06	37	2.4	11	1.6	3.5	.56	2.3
12	.17	.08	.27	.03	.08	33	2.4	11	1.6	3.3	.88	2.2
13	.18	.09	.41	.03	.10	33	2.3	14	1.5	2.7	.93	2.4
14	.20	.12	.35	.03	.06	31	2.6	19	1.6	2.2	1.0	2.3
15	.21	.12	.25	.03	.04	26	2.6	22	1.6	2.0	1.2	2.4
16	.21	.11	.20	.04	.05	21	2.6	20	1.7	2.4	1.0	2.6
17	.21	.11	.17	.04	.06	33	2.8	22	1.6	2.7	.87	2.8
18	.21	.12	.15	.03	.09	29	2.7	22	1.9	3.0	.88	2.9
19	.23	.13	.16	.03	.07	26	2.6	19	2.0	3.5	1.2	3.0
20	.23	.16	.13	.03	.06	22	2.4	17	3.2	2.8	1.4	4.1
21	.22	.14	.11	.03	.07	16	2.4	14	6.8	.87	1.5	4.5
22	.20	.11	.10	.04	.06	25	2.3	9.4	6.6	.92	1.5	4.6
23	.19	.12	.10	.06	.06	21	2.4	8.2	5.2	.70	1.5	4.6
24	.19	.16	.10	.05	.08	19	2.4	7.3	4.3	.61	1.5	4.6
25	.19	.24	.13	.04	.15	7.0	2.3	6.1	4.6	.58	1.5	4.6
26	.20	.32	.18	.04	.53	6.8	2.3	6.6	5.2	.58	1.6	4.6
27	.21	.27	.14	.03	4.9	7.0	2.7	5.2	4.3	.58	1.5	4.6
28	.23	.22	.13	.03	11	8.2	4.0	5.5	3.6	.58	1.5	4.6
29	.27	.22	.17	.03	---	8.2	5.5	5.2	4.5	.58	1.5	4.5
30	.30	.25	.23	.03	---	8.5	8.8	4.1	3.6	.58	1.5	4.6
31	.22	---	.20	.03	---	11	---	3.6	---	.58	1.5	---
TOTAL	41.22	5.02	7.23	1.27	17.90	737.7	158.1	415.6	88.0	69.26	33.09	94.8
MEAN	1.33	.17	.23	.041	.64	23.8	5.27	13.4	2.93	2.23	1.07	3.16
MAX	35	.57	.56	.16	11	46	28	22	6.8	4.7	1.6	4.6
MIN	.17	.06	.10	.02	.03	6.8	2.3	3.6	1.4	.58	.50	1.4
AC-FT	82	10.0	14	2.5	36	1460	314	824	175	137	66	188

CAL YR 1977 TOTAL 223.62 MEAN .61 MAX 35 MIN .00 AC-FT 444
WTR YR 1978 TOTAL 1669.19 MEAN 4.57 MAX 46 MIN .02 AC-FT 3310

NOTE.--NO GAGE-HEIGHT RECORD DEC. 21 TO FEB. 22.

09095500 COLORADO RIVER NEAR CAMEO, CO

LOCATION.--Lat 39°14'20", long 108°16'00", in SW¼SW¼ sec.30, T.9 S., R.97 W., Mesa County, Hydrologic Unit 14010006, on left bank 100 ft (30 m) north of U.S. Highways 6 and 24, 0.5 mi (0.8 km) upstream from Jackson Canyon, 5.9 mi (9.5 km) upstream from Grand Valley project diversion dam, and 7 mi (11 km) northeast of Cameo.

DRAINAGE AREA.--8,050 mi^2 (20,850 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WRD Colo. 1973: 1970.

GAGE.--Water-stage recorder. Datum of gage is 4,813.73 ft (1,467.225 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 10, 1934, nonrecording gage on river and water-stage recorder on Highline Canal, about 10 mi (16 km) downstream at different datum. Oct. 10, 1934, to Feb. 27, 1958, water-stage recorder at site 3.0 mi (4.8 km) downstream at datum 22.55 ft (6.873 m) lower.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversion for irrigation of about 160,000 acres (648 km^2).

AVERAGE DISCHARGE.--45 years, 3,801 ft^3/s (107.6 m^3/s), 2,754,000 acre-ft/yr (3,396 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft^3/s (1,020 m^3/s) June 16, 1935, gage height, 10.91 ft (3.325 m), site and datum then in use; maximum gage height, 11.60 ft (3.536 m) June 8, 1952, site and datum then in use; minimum daily discharge, 700 ft^3/s (19.8 m^3/s) Dec. 29, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,100 ft^3/s (569 m^3/s) at 2400 June 16, gage height, 10.26 ft (3.127 m); minimum daily, 1,120 ft^3/s (31.7 m^3/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	1430	1450	1350	1290	1440	2330	3860	10700	11300	3010	1720
2	1660	1430	1410	1220	1300	1800	2820	3810	10800	10600	2940	1720
3	1700	1420	1420	1120	1250	1800	2730	3680	11100	9630	2890	1740
4	1720	1440	1490	1250	1290	1600	2600	3900	11400	8900	2730	1820
5	1710	1440	1550	1390	1330	1720	2500	4140	11800	8130	2580	1820
6	1580	1420	1530	1390	1300	1890	2500	4140	11100	7380	2460	1790
7	2070	1420	1410	1370	1370	1660	2460	3960	10800	6800	2340	1730
8	1820	1390	1420	1350	1400	1520	2490	3640	11500	6440	2270	1760
9	1850	1370	1480	1310	1370	1490	2740	3460	11900	6280	2150	1770
10	1850	1340	1340	1280	1350	1470	3140	3240	13500	6440	2100	1840
11	1760	1310	1400	1340	1440	1460	2870	3310	16200	6370	2090	1860
12	1750	1380	1420	1340	1370	1470	2790	3580	17900	6370	2090	1870
13	1730	1330	1410	1330	1340	1410	2790	3820	18000	6160	2310	1890
14	1650	1310	1390	1300	1320	1370	2840	4320	18400	5750	2340	1890
15	1610	1300	1420	1270	1310	1350	2890	5820	18700	5480	2420	1850
16	1610	1290	1470	1360	1310	1340	2930	8100	19300	5420	2440	1810
17	1630	1300	1430	1340	1300	1310	3010	10000	19100	5650	2320	1830
18	1530	1300	1270	1310	1220	1360	3010	10600	17200	5960	2250	1850
19	1410	1400	1400	1330	1220	1390	2870	9050	15500	5460	2110	1900
20	1420	1440	1390	1280	1260	1430	2750	8360	15000	5130	2010	1970
21	1420	1400	1240	1320	1290	1500	2740	7860	14400	4870	1900	2020
22	1380	1280	1150	1290	1340	1660	2750	8650	14200	4680	1850	1980
23	1410	1420	1220	1280	1300	1690	2740	9140	14600	4460	1880	1950
24	1430	1450	1430	1270	1310	1670	2740	10400	14900	4220	1910	1900
25	1430	1450	1500	1250	1310	1610	2740	11600	15300	3980	1890	1820
26	1420	1460	1470	1240	1330	1550	2840	11800	15200	3600	1880	1800
27	1400	1480	1390	1300	1430	1540	3310	11600	13200	3380	1880	1780
28	1380	1490	1350	1310	1420	1590	3980	11300	11900	3220	1840	1760
29	1390	1450	1370	1220	---	1680	4000	10200	11600	3090	1790	1750
30	1400	1450	1420	1250	---	1800	3860	9820	11600	3100	1720	1740
31	1450	---	1460	1320	---	1920	---	10400	---	3110	1720	---
TOTAL	49250	41790	43500	40280	37070	48490	86760	217560	426800	181360	68080	54930
MEAN	1589	1393	1403	1299	1324	1564	2892	7018	14230	5850	2196	1831
MAX	2070	1490	1550	1390	1440	1920	4000	11800	19300	11300	3010	2020
MIN	1380	1280	1150	1120	1220	1310	2330	3240	10700	3090	1720	1720
AC-FT	97690	82890	86280	79900	73530	96180	172100	431500	846600	359700	135000	109000

CAL YR 1977 TOTAL 657210 MEAN 1801 MAX 4540 MIN 1150 AC-FT 1304000
WTR YR 1978 TOTAL 1295870 MEAN 3550 MAX 19300 MIN 1120 AC-FT 2570000

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1933 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1935 to current year.
WATER TEMPERATURES: April 1949 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,970 micromhos Jan. 19, 1940; minimum daily, 235 micromhos May 26, 1936.
WATER TEMPERATURES: Maximum, 24°C Aug. 16, 1962; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,400 micromhos Oct. 23-30, Nov. 1-10; minimum daily, 275 micromhos June 13-18.
WATER TEMPERATURES: Maximum daily, 20.5°C Aug. 24; minimum daily, 0.0°C many days during December to January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 17...	1200	1620	1120	7.8	10.5	9.4	270	130	75
NOV 14...	1100	1320	1200	7.2	4.0	10.8	340	170	95
DEC 05...	1400	1560	1360	7.4	5.0	11.2	310	160	87
JAN 26...	1130	1140	1320	7.7	.5	12.2	300	150	85
MAR 15...	1330	1340	1180	8.2	7.5	10.6	300	160	82
APR 06...	1100	2800	850	8.2	11.5	8.9	240	110	67
MAY 16...	1245	7970	450	8.0	15.0	7.0	160	58	46
JUN 20...	1330	14900	290	8.0	14.0	8.0	110	30	32
JUL 24...	1200	5000	600	8.2	20.0	8.4	180	60	52
AUG 24...	1330	1920	1025	8.4	20.5	7.8	270	120	79

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 17...	19	140	3.7	4.3	170	0	140	160	200
NOV 14...	24	160	3.8	5.0	200	0	160	200	240
DEC 05...	23	160	3.9	4.7	190	0	160	180	220
JAN 26...	22	170	4.3	4.8	190	0	160	180	230
MAR 15...	22	150	3.8	4.4	170	0	140	180	200
APR 06...	18	88	2.5	3.5	160	0	130	130	110
MAY 16...	12	34	1.2	2.6	130	0	110	74	38
JUN 20...	6.5	18	.8	1.3	94	0	77	35	24
JUL 24...	11	57	1.9	2.4	140	0	110	85	79
AUG 24...	17	130	3.5	4.1	180	1	150	150	180

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 17...	.3	6.3	689	.94	3010	.00	.00	50	20
NOV 14...	.3	7.9	831	1.13	2960	.09	.01	10	20
DEC 05...	.3	7.9	777	1.06	3270	.12	.00	10	20
JAN 26...	.3	8.6	796	1.08	2450	.29	.03	20	20
MAR 15...	.4	8.1	732	1.00	2650	.28	.00	30	10
APR 06...	.4	10	508	.69	3840	.46	.01	10	10
MAY 16...	.2	9.5	282	.38	6070	.39	.00	10	40
JUN 20...	.1	7.7	171	.23	6880	.11	.01	20	10
JUL 24...	.2	7.9	364	.50	4910	.04	.00	30	0
AUG 24...	.3	9.5	660	.90	3420	.02	.00	--	20

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1400	1300	1200	1100	1030	800	650	475	325	775	1000
2	1050	1400	1300	1200	1100	1030	800	650	475	325	775	1000
3	1050	1400	1300	1200	1100	1030	800	650	475	350	775	1000
4	1050	1400	1300	1200	1100	1030	800	650	475	350	800	1000
5	1050	1400	1300	1200	1100	1030	800	650	475	350	800	1000
6	1050	1400	1300	1200	1100	1030	800	650	450	400	800	1000
7	1050	1400	1300	1200	1100	1100	800	650	450	400	850	1000
8	1000	1400	1300	1200	1100	1100	800	650	400	400	850	1000
9	1000	1400	1300	1200	1100	1100	800	650	350	450	850	1000
10	1000	1400	1300	1200	1100	1200	850	650	325	450	850	1000
11	1000	1350	1300	1200	1100	1200	850	600	300	450	850	1000
12	1000	1350	1300	1200	1100	1200	850	600	300	475	850	1000
13	1000	1350	1300	1200	1100	1200	850	600	275	475	850	1000
14	1000	1350	1300	1200	1100	1200	850	600	275	500	850	1000
15	1100	1350	1200	1200	1100	1200	850	600	275	500	850	1000
16	1100	1350	1200	1200	1100	1200	850	600	275	500	850	1000
17	1100	1350	1200	1100	1100	1200	850	600	275	500	900	1000
18	1100	1350	1200	1100	1050	1300	850	600	275	600	900	1000
19	1100	1300	1200	1100	1050	1300	850	575	300	600	900	1000
20	1100	1300	1200	1100	1050	1300	850	575	300	600	900	1000
21	1300	1300	1200	1100	1050	1300	850	500	300	650	900	1000
22	1300	1300	1200	1100	1050	1200	850	500	300	650	900	1000
23	1400	1300	1200	1100	1030	1200	800	500	300	700	950	1000
24	1400	1300	1200	1100	1030	1050	100	500	300	700	950	1030
25	1400	1300	1200	1100	1030	1050	700	475	325	750	950	1030
26	1400	1300	1200	1100	1030	900	700	475	325	750	950	1030
27	1400	1300	1200	1100	1030	900	650	475	325	750	1000	1030
28	1400	1300	1200	1100	1030	900	650	475	325	775	1000	1030
29	1400	1300	1200	1100	---	800	650	475	325	775	1000	1030
30	1400	1300	1200	1100	---	800	---	475	325	775	1000	1030
31	1400	---	1200	1100	---	800	---	475	---	775	1000	---

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	5.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	18.0
2	11.0	5.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	18.0
3	11.0	5.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	18.0
4	11.0	5.0	3.0	.0	3.0	4.0	9.0	11.0	11.0	14.0	18.0	18.0
5	10.0	5.0	3.0	.0	3.0	4.0	9.0	11.0	11.0	15.0	18.0	18.0
6	10.0	5.0	3.0	.0	3.0	4.0	9.0	11.0	11.0	15.0	18.0	18.0
7	10.0	4.0	2.0	.0	3.0	5.0	9.0	12.0	11.0	15.0	18.0	18.0
8	9.0	4.0	2.0	.0	3.0	5.0	9.0	12.0	11.0	15.0	18.0	18.0
9	9.0	4.0	2.0	.0	3.0	5.0	9.0	12.0	11.0	15.0	18.0	18.0
10	9.0	4.0	2.0	.0	3.0	6.0	9.0	12.0	11.0	15.0	18.0	18.0
11	9.0	4.0	2.0	1.0	3.0	6.0	9.0	12.0	11.0	15.0	18.0	16.0
12	9.0	4.0	2.0	1.0	3.0	7.0	9.0	12.0	11.0	16.0	18.0	16.0
13	8.0	4.0	2.0	1.0	3.0	7.0	9.0	12.0	11.0	16.0	18.0	16.0
14	8.0	4.0	2.0	1.0	3.0	7.0	10.0	12.0	11.0	17.0	17.0	16.0
15	7.0	3.0	2.0	2.0	3.0	7.0	10.0	13.0	11.0	17.0	15.0	16.0
16	7.0	3.0	2.0	2.0	3.0	7.0	10.0	14.0	11.0	17.0	16.0	16.0
17	7.0	3.0	2.0	3.0	3.0	7.0	10.0	14.0	11.0	17.0	17.0	15.0
18	7.0	3.0	.0	3.0	4.0	8.0	10.0	13.0	11.0	17.0	17.0	15.0
19	7.0	3.0	.0	4.0	4.0	8.0	10.0	13.0	11.0	17.0	17.0	15.0
20	7.0	3.0	.0	4.0	4.0	9.0	10.0	13.0	12.0	17.0	18.0	11.0
21	7.0	3.0	.0	4.0	4.0	9.0	10.0	12.0	12.0	17.0	18.0	11.0
22	7.0	3.0	.0	4.0	4.0	9.0	10.0	12.0	13.0	18.0	18.0	11.0
23	7.0	3.0	.0	4.0	4.0	9.0	10.0	12.0	13.0	18.0	18.0	11.0
24	7.0	3.0	.0	4.0	4.0	9.0	10.0	12.0	13.0	18.0	19.0	12.0
25	7.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	19.0	12.0
26	7.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	19.0	13.0
27	7.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	19.0	13.0
28	6.0	3.0	.0	3.0	4.0	9.0	10.0	11.0	14.0	18.0	19.0	13.0
29	6.0	3.0	.0	3.0	---	9.0	10.0	11.0	14.0	18.0	19.0	13.0
30	5.0	3.0	.0	3.0	---	9.0	10.0	11.0	14.0	18.0	19.0	13.0
31	5.0	---	.0	3.0	---	9.0	---	11.0	---	18.0	19.0	---

09095526 GOVERNMENT HIGHLINE CANAL AT 16 ROAD, NEAR LOMA, CO

LOCATION.--Lat 39°15'25", long 108°45'22", in NE¼SE¼ sec.12, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 200 ft (61 m) downstream from county bridge on 16 Road, 0.4 mi (0.6 km) north of Q Road, and 5.1 mi (8.2 km) northeast of Loma.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,740 ft (1,445 m), from topographic map. Prior to Mar. 30, 1976, nonrecording gage at site 200 ft (61 m) upstream at same datum.

REMARKS.--Records good except for periods of no gage-height record, which are fair. Government Highline Canal diverts water from the Colorado River in SE¼NW¼ sec.13, T.10 S., R.98 W. Water flowing past this gage is used for irrigation in Reed Wash and Salt Creek basins. Surplus flows are wasted into Reed Wash and Highline Lake. Entire flow is regulated by diversion gates. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 375 ft³/s (10.6 m³/s) June 11, 1976; no flow for part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	.00	.00	.00	.00	.00	.00	288	355	330	315	255
2	238	.00	.00	.00	.00	.00	.00	315	360	336	310	265
3	245	.00	.00	.00	.00	.00	.00	318	357	325	310	260
4	251	.00	.00	.00	.00	.00	.00	325	358	301	310	250
5	246	.00	.00	.00	.00	.00	.00	339	355	306	314	250
6	252	.00	.00	.00	.00	.00	.00	348	345	310	310	250
7	228	.00	.00	.00	.00	.00	.00	357	335	310	310	252
8	248	.00	.00	.00	.00	.00	.00	358	330	315	310	272
9	256	.00	.00	.00	.00	.00	.00	349	330	320	310	298
10	259	.00	.00	.00	.00	.00	.00	331	330	320	320	302
11	262	.00	.00	.00	.00	.00	.00	328	320	320	320	302
12	265	.00	.00	.00	.00	.00	.00	328	320	320	310	315
13	272	.00	.00	.00	.00	.00	.00	330	320	325	320	317
14	274	.00	.00	.00	.00	.00	.00	330	320	330	322	312
15	286	.00	.00	.00	.00	.00	.00	340	322	325	320	314
16	298	.00	.00	.00	.00	.00	.00	340	322	315	307	288
17	306	.00	.00	.00	.00	.00	77	340	323	315	315	284
18	298	.00	.00	.00	.00	.00	263	350	322	310	307	280
19	272	.00	.00	.00	.00	.00	253	350	325	315	310	290
20	237	.00	.00	.00	.00	.00	276	350	312	320	314	302
21	231	.00	.00	.00	.00	.00	299	350	309	320	310	302
22	228	.00	.00	.00	.00	.00	263	350	302	320	273	290
23	163	.00	.00	.00	.00	.00	278	350	288	320	258	280
24	82	.00	.00	.00	.00	.00	280	350	290	310	259	283
25	18	.00	.00	.00	.00	.00	277	350	293	305	278	290
26	2.7	.00	.00	.00	.00	.00	293	360	304	310	255	283
27	1.4	.00	.00	.00	.00	.00	290	360	304	320	288	280
28	.70	.00	.00	.00	.00	.00	309	360	304	320	273	276
29	.24	.00	.00	.00	---	.00	296	360	310	320	256	262
30	.00	.00	.00	.00	---	.00	285	355	325	320	251	259
31	.00	---	.00	.00	---	.00	---	351	---	320	250	---
TOTAL	5968.04	.00	.00	.00	.00	.00	3739.00	10610	9690	9853	9255	8463
MEAN	193	.000	.000	.000	.000	.000	125	342	323	318	299	282
MAX	306	.00	.00	.00	.00	.00	309	360	360	336	322	317
MIN	.00	.00	.00	.00	.00	.00	.00	288	288	301	250	250
AC-FT	11840	.00	.00	.00	.00	.00	7420	21040	19220	19540	18380	16790

CAL YR 1977 TOTAL 63031.04 MEAN 173 MAX 360 MIN .00 AC-FT 125000
WTR YR 1978 TOTAL 57588.04 MEAN 158 MAX 360 MIN .00 AC-FT 114200

09095528 LATERAL NO. 48 NEAR MACK, CO

LOCATION.--Lat 39°16'17", long 108°49'59", in NE¼SE¼ sec.5, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on left bank 400 ft (120 m) downstream from headgate on Government Highline Canal and 3.7 mi (6.0 km) north of Mack.

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,720 ft (1,439 m), from topographic map.

REMARKS.--Records good. Water is used for irrigation of lands below gage along Mack Wash and Reed Wash. One small ditch diverts water about 10 ft (3 m) above gage. Entire flow is regulated by diversion gates. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 47 ft³/s (1.33 m³/s) Sept. 2, 1976; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	.00	.00	.00	.00	.00	.00	35	38	42	44	38
2	23	.00	.00	.00	.00	.00	.00	35	37	42	42	38
3	23	.00	.00	.00	.00	.00	.00	37	35	45	42	38
4	22	.00	.00	.00	.00	.00	.00	38	33	45	39	38
5	22	.00	.00	.00	.00	.00	.00	40	32	45	44	37
6	23	.00	.00	.00	.00	.00	.00	41	31	45	44	36
7	22	.00	.00	.00	.00	.00	.00	41	30	44	42	37
8	18	.00	.00	.00	.00	.00	.00	39	32	43	39	37
9	17	.00	.00	.00	.00	.00	.00	38	33	44	38	35
10	17	.00	.00	.00	.00	.00	.00	39	33	43	43	34
11	17	.00	.00	.00	.00	.00	.00	40	31	43	43	34
12	18	.00	.00	.00	.00	.00	.00	40	31	43	43	34
13	18	.00	.00	.00	.00	.00	.00	41	27	44	45	35
14	17	.00	.00	.00	.00	.00	.00	40	28	44	45	35
15	17	.00	.00	.00	.00	.00	.00	40	29	45	45	35
16	18	.00	.00	.00	.00	.00	.00	39	30	43	44	34
17	17	.00	.00	.00	.00	.00	.00	39	31	41	43	33
18	17	.00	.00	.00	.00	.00	.00	41	30	38	44	31
19	16	.00	.00	.00	.00	.00	.00	41	35	39	42	28
20	16	.00	.00	.00	.00	.00	.00	42	37	41	40	26
21	16	.00	.00	.00	.00	.00	.00	45	38	42	40	26
22	16	.00	.00	.00	.00	.00	.00	43	40	44	40	26
23	11	.00	.00	.00	.00	.00	.00	43	41	45	39	26
24	4.1	.00	.00	.00	.00	.00	9.8	43	43	44	39	26
25	3.6	.00	.00	.00	.00	.00	23	43	43	43	42	26
26	.61	.00	.00	.00	.00	.00	26	42	41	44	44	25
27	.93	.00	.00	.00	.00	.00	22	39	41	44	44	25
28	.03	.00	.00	.00	.00	.00	27	38	42	44	42	25
29	.00	.00	.00	.00	---	.00	33	37	41	44	42	24
30	.00	.00	.00	.00	---	.00	35	38	42	44	42	26
31	.00	---	.00	.00	---	.00	---	39	---	44	39	---
TOTAL	433.27	.00	.00	.00	.00	.00	175.80	1236	1055	1341	1304	948
MEAN	14.0	.000	.000	.000	.000	.000	5.86	39.9	35.2	43.3	42.1	31.6
MAX	23	.00	.00	.00	.00	.00	35	45	43	45	45	38
MIN	.00	.00	.00	.00	.00	.00	.00	35	27	38	38	24
AC-FT	859	.00	.00	.00	.00	.00	349	2450	2090	2660	2590	1880

CAL YR 1977 TOTAL 6362.97 MEAN 17.4 MAX 45 MIN .00 AC-FT 12620
WTR YR 1978 TOTAL 6493.07 MEAN 17.8 MAX 45 MIN .00 AC-FT 12880

09095529 CAMP NO. 7 SPILLWAY NEAR MACK, CO

LOCATION.--Lat 39°16'22", long 108°49'56", in NE¼SE¼ sec.5, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank at dam on spillway, 10 ft (3 m) downstream from headgates on Government Highline Canal, and 3.7 mi (6.0 km) north of Mack.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete weir. Altitude of gage is 4,720 ft (1,439 m), from topographic map. Prior to Mar. 30, 1976, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Government Highline Canal diverts from Colorado River in SW¼NW¼ sec.13, T.10 S., R.98 W. Water flowing past this gage is waste water into Highline Lake. Flow is regulated by a diversion gate.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 121 ft³/s (3.43 m³/s) Apr. 7, 1976; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	.00	.00	.00	.00	.00	.00	74	35	.00	.11	2.4
2	55	.00	.00	.00	.00	.00	.00	50	36	5.0	.11	2.4
3	55	.00	.00	.00	.00	.00	.00	37	38	.00	.11	2.4
4	57	.00	.00	.00	.00	.00	.00	34	38	.00	.11	2.4
5	55	.00	.00	.00	.00	.00	.00	34	38	.00	.11	2.4
6	60	.00	.00	.00	.00	.00	.00	34	38	.00	.11	2.4
7	53	.00	.00	.00	.00	.00	.00	34	38	.00	.11	2.4
8	61	.00	.00	.00	.00	.00	.00	34	38	.00	.11	2.5
9	67	.00	.00	.00	.00	.00	.00	34	39	.11	.11	3.1
10	69	.00	.00	.00	.00	.00	.00	34	31	.11	.11	11
11	69	.00	.00	.00	.00	.00	.00	28	26	.11	.11	31
12	78	.00	.00	.00	.00	.00	.00	24	14	.11	.11	52
13	81	.00	.00	.00	.00	.00	.00	28	4.2	.11	.11	65
14	82	.00	.00	.00	.00	.00	.00	32	.00	.11	.11	67
15	86	.00	.00	.00	.00	.00	.00	37	.00	.11	.11	65
16	89	.00	.00	.00	.00	.00	.00	41	.00	.11	.11	62
17	90	.00	.00	.00	.00	.00	14	40	.00	.11	.11	59
18	92	.00	.00	.00	.00	.00	66	30	.00	.11	.11	58
19	85	.00	.00	.00	.00	.00	72	26	.00	.11	.11	62
20	76	.00	.00	.00	.00	.00	90	20	.00	.11	.11	70
21	72	.00	.00	.00	.00	.00	90	22	3.6	.11	.11	74
22	72	.00	.00	.00	.00	.00	82	25	12	.11	.00	71
23	72	.00	.00	.00	.00	.00	74	29	12	.11	.00	72
24	19	.00	.00	.00	.00	.00	66	30	12	.11	.00	73
25	8.6	.00	.00	.00	.00	.00	64	30	12	.11	.00	74
26	4.1	.00	.00	.00	.00	.00	66	30	1.0	.11	2.2	72
27	.90	.00	.00	.00	.00	.00	73	30	.00	.11	2.3	70
28	.90	.00	.00	.00	.00	.00	80	30	.00	.11	2.3	65
29	.60	.00	.00	.00	---	.00	83	30	.00	.11	2.3	61
30	.21	.00	.00	.00	---	.00	81	30	.00	.11	2.4	60
31	.00	---	.00	.00	---	.00	---	30	---	.11	2.4	---
TOTAL	1667.31	.00	.00	.00	.00	.00	1001.00	1021	467.80	7.53	16.21	1316.4
MEAN	53.8	.000	.000	.000	.000	.000	33.4	32.9	15.6	.24	.52	43.9
MAX	92	.00	.00	.00	.00	.00	90	74	39	5.0	2.4	74
MIN	.00	.00	.00	.00	.00	.00	.00	20	.00	.00	.00	2.4
AC-FT	3310	.00	.00	.00	.00	.00	1990	2030	928	15	32	2610

CAL YR 1977 TOTAL 7245.06 MEAN 19.8 MAX 116 MIN .00 AC-FT 14370
WTR YR 1978 TOTAL 5497.25 MEAN 15.1 MAX 92 MIN .00 AC-FT 10900

09095530 GOVERNMENT HIGHLINE CANAL NEAR MACK, CO

LOCATION.--Lat 39°17'09", long 108°49'46", in NE¼SE¼ sec.12, T.9 S., R.103 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 50 ft (15 m) upstream from flume over Mack Wash, 1.1 mi (1.8 km) downstream from headgate of Lateral No. 48, and 4.6 mi (7.4 km) north of Mack.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,717 ft (1,438 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Government Highline Canal diverts water from the Colorado River in SE¼NW¼ sec.13, T.10 S., R.98 W. Water flowing past this gage is used for irrigation in Salt Creek basin. Surplus flows are wasted into West Salt Creek and Badger Wash. Water can be wasted into Mack Wash from flume below gage. The entire flow is regulated by diversion gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 165 ft³/s (4.67 m³/s) July 18, 1973; no flow for part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	.00	.00	.00	.00	.00	.00	130	148	154	151	158
2	91	.00	.00	.00	.00	.00	.00	125	149	149	151	158
3	92	.00	.00	.00	.00	.00	.00	120	150	148	151	147
4	92	.00	.00	.00	.00	.00	.00	114	149	140	151	158
5	92	.00	.00	.00	.00	.00	.00	116	148	142	154	151
6	92	.00	.00	.00	.00	.00	.00	120	149	143	154	132
7	86	.00	.00	.00	.00	.00	.00	120	149	142	154	139
8	89	.00	.00	.00	.00	.00	.00	121	149	146	154	152
9	87	.00	.00	.00	.00	.00	.00	122	148	145	154	150
10	86	.00	.00	.00	.00	.00	.00	120	149	145	158	146
11	87	.00	.00	.00	.00	.00	.00	130	148	144	158	145
12	87	.00	.00	.00	.00	.00	.00	134	148	144	154	146
13	88	.00	.00	.00	.00	.00	.00	134	149	150	154	148
14	89	.00	.00	.00	.00	.00	.00	134	148	154	154	148
15	89	.00	.00	.00	.00	.00	.00	134	147	154	154	148
16	90	.00	.00	.00	.00	.00	.00	135	147	153	154	148
17	91	.00	.00	.00	.00	.00	.00	140	143	151	154	147
18	91	.00	.00	.00	.00	.00	30	144	147	153	158	146
19	87	.00	.00	.00	.00	.00	41	146	150	153	154	147
20	85	.00	.00	.00	.00	.00	44	147	152	150	154	148
21	82	.00	.00	.00	.00	.00	49	148	151	150	154	144
22	82	.00	.00	.00	.00	.00	22	148	144	145	154	140
23	41	.00	.00	.00	.00	.00	21	148	149	145	144	130
24	25	.00	.00	.00	.00	.00	21	148	134	148	143	125
25	24	.00	.00	.00	.00	.00	21	148	136	147	146	124
26	16	.00	.00	.00	.00	.00	21	148	144	151	148	124
27	16	.00	.00	.00	.00	.00	68	148	144	153	148	124
28	14	.00	.00	.00	.00	.00	116	148	145	152	148	124
29	12	.00	.00	.00	---	.00	116	147	149	152	151	124
30	10	.00	.00	.00	---	.00	137	145	154	154	148	124
31	4.2	---	.00	.00	---	.00	---	149	---	156	151	---
TOTAL	2111.2	.00	.00	.00	.00	.00	707.00	4211	4417	4613	4715	4245
MEAN	68.1	.000	.000	.000	.000	.000	23.6	136	147	149	152	142
MAX	92	.00	.00	.00	.00	.00	137	149	154	156	158	158
MIN	4.2	.00	.00	.00	.00	.00	.00	114	134	140	143	124
AC-FT	4190	.00	.00	.00	.00	.00	1400	8350	8760	9150	9350	8420

CAL YR 1977 TOTAL 26975.20 MEAN 73.9 MAX 152 MIN .00 AC-FT 53510
WTR YR 1978 TOTAL 25019.20 MEAN 68.5 MAX 158 MIN .00 AC-FT 49630

09095530 GOVERNMENT HIGHLINE CANAL NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since August 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,150 micromhos Oct. 2, 1974; minimum 296 micromhos June 15, 1976.
WATER TEMPERATURE: Maximum, 27.5°C July 30 and Aug. 11, 1978; minimum 1.5°C Apr. 11-14, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,350 micromhos Sept. 21; minimum, 296 micromhos June 15, 21.
WATER TEMPERATURES: Maximum, 27.5°C July 30, Aug. 11; minimum, not determined.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
18...	1300	90	1100	8.5	12.5	8.9	270	130	75
APR									
18...	0950	53	800	7.8	10.0	9.0	250	110	70
JUL									
13...	0830	157	450	8.2	19.5	7.2	150	64	46

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)
OCT									
18...	19	140	3.7	4.4	160	1	130	180	170
APR									
18...	18	84	2.3	3.8	170	0	140	130	100
JUL									
13...	9.6	42	1.5	1.9	110	0	90	66	53

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT									
18...	.3	6.8	676	.92	164	.05	.01	20	0
APR									
18...	.3	9.3	502	.68	72.1	.57	.00	50	10
JUL									
13...	.2	7.7	282	.38	120	.29	.03	30	0

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09095530 GOVERNMENT HIGHLINE CANAL NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100						---	646	481	320	712	992
2	1050						---	660	471	302	709	1010
3	1060						---	666	456	298	717	1020
4	1070						---	678	430	308	729	1020
5	1080						---	681	422	317	737	1020
6	1080						---	667	409	323	752	1010
7	1080						---	644	370	335	775	996
8	1080						---	640	387	337	801	1060
9	1080						---	650	391	338	829	1050
10	1080						---	664	369	348	849	1040
11	1080						---	678	355	387	868	1040
12	1070						---	692	343	440	889	1030
13	1060						---	692	323	464	896	1010
14	1050						---	674	309	452	899	1010
15	1050						---	650	307	456	855	1010
16	1070						---	589	309	473	827	1040
17	1080						---	547	308	489	813	1040
18	1100						830	571	308	487	800	1060
19	1110						809	550	306	479	810	1080
20	1110						775	550	306	478	823	1090
21	1110						777	561	304	506	837	1250
22	1110						797	560	322	535	869	1000
23	---						808	569	336	547	906	982
24	---						798	509	353	553	945	1100
25	---						804	494	365	569	958	1100
26	---						809	492	377	594	940	1100
27	---						815	507	386	619	929	1060
28	---						813	512	397	656	932	1050
29	---						722	512	384	686	934	1050
30	---						656	496	366	699	950	1050
31	---						---	487	---	706	973	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	13.0										
2	13.5	11.0										
3	13.5	10.5										
4	14.0	11.5										
5	15.0	13.0										
6	14.5	13.5										
7	14.5	12.0										
8	14.0	11.5										
9	12.5	8.5										
10	12.0	10.0										
11	11.5	9.0										
12	11.0	7.5										
13	10.5	8.0										
14	10.5	8.0										
15	11.0	8.0										
16	12.0	9.0										
17	13.0	9.5										
18	11.5	10.0										
19	12.0	10.0										
20	12.0	10.5										
21	13.0	10.0										
22	13.5	12.0										
23	---	---										
24	---	---										
25	---	---										
26	---	---										
27	---	---										
28	---	---										
29	---	---										
30	---	---										
31	---	---										

09095530 GOVERNMENT HIGHLINE CANAL NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	15.5	13.5	17.5	15.5	21.0	18.5	26.0	24.0	23.5	22.0
2	---	---	16.0	13.5	17.5	14.5	21.0	18.5	26.0	23.5	24.0	22.0
3	---	---	16.5	14.5	17.5	15.5	20.5	18.5	25.5	23.0	24.0	22.0
4	---	---	16.0	14.5	18.5	16.5	20.5	18.5	24.5	22.0	24.5	22.5
5	---	---	14.5	13.0	18.0	16.5	21.0	18.5	25.0	23.0	24.5	22.5
6	---	---	13.5	11.0	17.5	15.5	21.0	18.5	25.5	23.0	25.0	23.0
7	---	---	12.5	10.5	17.5	15.5	21.5	19.5	25.5	23.0	25.0	23.0
8	---	---	12.5	10.5	19.0	17.0	22.0	20.0	26.0	23.5	24.0	23.0
9	---	---	14.0	10.5	19.5	17.5	22.5	20.5	26.0	24.0	24.0	22.5
10	---	---	15.0	12.0	19.0	17.5	22.5	21.0	27.0	25.5	23.5	22.5
11	---	---	16.5	14.5	19.5	17.0	22.0	20.5	27.5	24.5	22.5	21.0
12	---	---	17.0	15.0	18.5	16.5	---	---	26.0	24.0	21.5	19.5
13	---	---	17.5	15.5	19.5	16.5	23.5	---	25.5	24.0	20.0	18.5
14	---	---	18.5	16.5	19.0	16.5	23.5	22.0	24.5	22.5	19.0	18.0
15	---	---	19.5	17.5	19.5	17.0	23.5	22.0	23.5	21.0	19.5	17.5
16	---	---	19.5	17.5	19.5	17.0	24.0	22.0	22.5	21.0	20.5	18.5
17	---	---	18.0	16.5	19.5	16.5	23.5	22.0	22.5	21.0	21.5	19.5
18	13.0	11.0	17.5	15.0	19.0	16.5	24.5	22.0	22.0	20.5	20.0	18.0
19	14.0	11.0	16.0	14.0	19.0	16.5	24.5	22.5	22.0	20.5	18.5	16.5
20	15.0	11.5	16.5	14.5	19.5	16.5	24.5	22.5	22.0	20.5	16.5	15.0
21	14.5	12.0	16.0	15.5	20.0	17.5	24.5	23.0	22.5	21.0	16.0	14.0
22	13.5	5.0	17.5	15.0	20.5	17.5	24.5	22.0	23.0	22.0	16.0	13.5
23	13.5	11.0	17.5	15.5	20.5	18.5	24.5	22.0	24.0	22.0	17.5	15.5
24	14.5	12.0	17.5	15.5	21.0	18.5	25.5	22.5	24.0	22.0	18.0	---
25	15.5	14.0	17.5	15.5	20.5	18.5	25.5	23.0	24.0	22.0	18.5	---
26	15.5	14.0	17.5	14.5	20.5	17.5	26.0	23.0	24.0	22.5	20.5	---
27	17.5	14.5	17.5	15.0	20.5	18.0	26.5	23.0	24.0	22.0	20.5	18.5
28	16.5	15.0	17.5	15.5	19.5	18.5	26.0	24.0	23.5	22.0	20.5	---
29	15.5	14.0	17.5	15.5	19.0	17.5	26.5	24.0	23.5	22.0	19.5	---
30	15.5	13.5	18.0	16.0	20.5	17.5	27.5	24.5	24.0	22.0	19.5	---
31	---	---	17.5	15.5	---	---	26.5	24.0	23.5	22.0	---	---

09096100 VEGA RESERVOIR NEAR COLLBRAN, CO

LOCATION.--Lat 39°13'30", long 107°48'40", in sec.6, T.10 S., R.93 W., Mesa County, Hydrologic Unit 14010005, at dam on Plateau Creek, 10 mi (16 km) southeast of Collbran.

DRAINAGE AREA.--24.4 mi² (63.2 km²).

PERIOD OF RECORD.--April 1960 to current year.

GAGE.--Nonrecording gage read once daily. Datum of gage is 7,906 ft (2,409.7 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by an earth and rockfill dam. Dam completed by U.S. Bureau of Reclamation in 1960. Usable storage began in May 1958 while dam was under construction. Capacity of reservoir, 32,930 acre-ft (40.6 hm³) between elevations 7,906 ft (2,409.7 m), bottom of outlet gate, and 7,984 ft (2,433.5 m), crest of spillway. Dead storage, 823 acre-ft (1.01 hm³). Figures given are usable contents. Reservoir is used to store water for irrigation and power development.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 35,220 acre-ft (43.4 hm³) June 17, 1975, elevation, 7,985.5 ft (2,434.29 m); minimum since first filling in May 1962, 850 acre-ft (1.05 hm³) Aug. 19 to Sept. 30, 1977, Oct. 1 to Nov. 30, 1978, elevation, 7,914.6 ft (2,412.37 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, not determined; minimum, 850 acre-ft (1.05 hm³) Oct. 1 to Nov. 30, elevation, 7,914.6 ft (2,412.37 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 1000, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,914.6	850	-
Oct. 31	7,914.6	850	0
Nov. 30	7,914.6	850	0
Dec. 31	7,915.2	930	+80
CAL YR 1977	-	-	-4,650
Jan. 31	7,916.1	1,060	+130
Feb. 28	7,917.2	1,220	+160
Mar. 31	7,918.4	1,400	+180
Apr. 30	7,929.4	3,580	+2,180
May 31	7,952.6	11,650	+8,070
June 30	7,984.4	33,300	+21,650
July 31	7,979.2	38,780	-4,520
Aug. 31	7,962.1	16,670	-12,110
Sept. 30	7,945.3	8,580	-8,090
WTR YR 1978	-	-	+7,730

09096500 PLATEAU CREEK NEAR COLLBRAN, CO

LOCATION.--Lat 39°15'02", long 107°50'24", in SE¼NE¼ sec.26, T.9 S., R.94 W., Mesa County, Hydrologic Unit 14010005, on right bank 10 ft (3 m) downstream from private bridge, 1.5 mi (2.4 km) downstream from Leon Creek, and 6.6 mi (10.6 km) east of Collbran.

DRAINAGE AREA.--80.4 mi² (208.2 km²).

PERIOD OF RECORD.--September 1921 to current year. Prior to October 1933, monthly discharge only, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1922(M), 1935(M). WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,130 ft (2,173 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by storage in Vega Reservoir (station 09096100) since May 1958, transbasin diversion to Surface Creek in Gunnison River basin, diversions above station for irrigation of about 800 acres (3.24 km²) above and about 8,400 acres (34.0 km²) below station and about 550 acres (2.23 km²) in Buzzard Creek drainage, and for power development. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--39 years (water years 1922-60), 92.2 ft³/s (2.61 m³/s), 66,800 acre-ft/yr (82.4 hm³/yr), prior to completion of Vega Reservoir; 18 years (water years 1961-78), 30.1 ft³/s (0.852 m³/s), 21,810 acre-ft/yr (26.9 hm³/yr), subsequent to completion of Vega Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,080 ft³/s (87.2 m³/s) May 27, 1922, gage height, 5.90 ft (2.103 m), from rating curve extended above 1,300 ft³/s (37 m³/s); minimum daily, 1.4 ft³/s (0.040 m³/s) Oct. 19, 20, 1973 (result of storage in Vega Reservoir); minimum daily prior to construction of Vega Reservoir, 3.0 ft³/s (0.085 m³/s) Sept. 21, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 518 ft³/s (14.7 m³/s) at 2000 June 10, gage height, 4.00 ft (1.219 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	5.3	9.3	5.4	6.4	8.0	31	5.1	60	53	22	14
2	4.7	9.3	6.6	5.4	7.3	9.0	15	4.7	61	41	23	14
3	4.5	9.2	6.7	5.6	7.2	9.3	5.2	10	61	34	22	14
4	4.3	8.0	6.8	5.6	6.7	9.8	4.2	18	54	36	22	14
5	4.5	7.6	6.8	5.6	6.8	10	4.1	18	45	34	22	16
6	5.6	7.9	6.2	5.6	6.4	11	3.9	18	48	34	23	16
7	19	8.5	5.6	5.7	6.6	10	4.8	17	65	32	22	16
8	12	6.8	5.3	5.6	6.6	13	5.4	17	98	28	21	15
9	8.7	1.6	5.6	5.6	6.6	14	7.6	16	171	28	18	13
10	7.8	6.7	6.0	5.6	6.3	12	6.7	17	243	34	18	13
11	6.1	11	6.3	5.6	6.9	12	5.0	18	224	39	20	14
12	5.3	8.8	6.0	5.8	7.6	12	5.5	18	169	37	24	15
13	6.1	7.8	6.0	5.6	6.6	12	5.3	18	164	36	24	16
14	6.5	7.8	6.0	5.8	7.5	12	5.8	18	145	36	24	16
15	5.8	7.1	6.1	6.0	6.8	13	6.9	17	137	35	24	16
16	5.3	7.6	6.2	6.0	6.8	14	7.2	37	80	36	22	16
17	5.1	7.7	6.2	6.0	6.8	11	6.3	47	50	36	20	20
18	5.2	6.3	6.2	6.0	6.6	12	4.9	48	41	37	20	20
19	5.3	6.3	6.2	6.0	6.6	12	4.4	46	40	36	20	19
20	5.4	8.2	6.0	6.0	7.0	12	5.0	48	47	34	20	16
21	6.1	9.0	6.0	6.0	7.3	13	4.9	47	60	32	19	16
22	5.5	7.7	5.6	6.3	7.2	14	4.3	47	73	31	19	16
23	5.5	7.5	5.6	6.3	7.2	13	4.2	45	83	27	20	15
24	5.1	7.7	5.8	6.2	7.5	12	4.4	38	87	25	16	14
25	5.2	7.0	5.8	6.0	7.1	12	4.6	53	88	24	16	14
26	5.7	6.9	5.4	6.4	6.8	11	4.8	58	86	26	16	14
27	5.3	7.1	5.3	6.6	6.9	12	4.9	54	71	24	14	14
28	5.2	6.9	5.3	6.6	7.6	14	6.0	45	54	23	14	14
29	5.7	7.9	5.3	6.6	---	15	5.9	47	58	22	14	14
30	6.6	6.6	5.3	6.6	---	18	5.9	53	61	22	14	12
31	5.0	---	5.3	6.6	---	22	---	54	---	20	15	---
TOTAL	192.0	223.8	186.8	184.7	193.7	384.1	194.1	996.8	2724	992	610	456
MEAN	6.19	7.46	6.03	5.96	6.92	12.4	6.47	32.2	90.8	32.0	19.7	15.2
MAX	19	11	9.3	6.6	7.6	22	31	58	243	53	24	20
MIN	3.9	1.6	5.3	5.4	6.3	8.0	3.9	4.7	40	20	14	12
AC-FT	381	444	371	366	384	762	385	1980	5400	1970	1210	904

CAL YR 1977 TOTAL 3947.2 MEAN 10.8 MAX 53 MIN 1.6 AC-FT 7830
WTR YR 1978 TOTAL 7338.0 MEAN 20.1 MAX 243 MIN 1.6 AC-FT 14550

09097500 BUZZARD CREEK NEAR COLLBRAN, CO

LOCATION.--Lat 39°16'20", long 107°51'00", in SE¼SW¼ sec.14, T.9 S., R.94 W., Mesa County, Hydrologic Unit 14010005, on right bank 150 ft (46 m) upstream from county bridge, 1.1 mi (1.8 km) upstream from Brush Creek, and 7 mi (11 km) east of Collbran.

DRAINAGE AREA.--143 mi^2 (370 km^2).

PERIOD OF RECORD.--September 1921 to current year. Prior to October 1933, monthly discharges only, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1922(M). WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,955 ft (2,120 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record and those for winter period, which are poor. Diversions for irrigation of about 1,300 acres (5.26 km^2) above station. Erie Canal imports water from Plateau Creek for irrigation of about 280 acres (1.13 km^2) above station. Small diversions above station from Middleton and Uhl Creeks to West Mamm Creek (Mamm Creek basin) Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--57 years, 46.1 ft^3/s (1.306 m^3/s), 33,400 acre-ft/yr (41.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft^3/s (46.2 m^3/s) May 14, 1941, gage height, 7.80 ft (2.377 m), from rating curve extended above 900 ft^3/s (25 m^3/s); no flow for many days in 1959-60, 1963, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 521 ft^3/s (14.8 m^3/s) at 0230 May 17, gage height, 4.98 ft (1.518 m), only peak above base of 350 ft^3/s (9.9 m^3/s); minimum daily, 0.32 ft^3/s (0.009 m^3/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	1.0	1.4	1.3	1.5	1.8	160	123	185	47	2.9	5.2
2	.48	1.2	1.5	1.2	1.4	2.2	99	118	185	29	2.0	6.1
3	.40	1.4	1.6	1.3	1.4	2.4	80	137	166	24	1.5	5.6
4	.36	1.4	1.6	1.5	1.4	2.5	70	140	180	23	1.5	2.7
5	.40	1.5	1.6	1.5	1.4	2.7	81	128	175	19	1.4	5.3
6	.48	1.5	1.4	1.5	1.4	2.9	87	109	155	18	1.5	4.2
7	1.1	1.3	1.4	1.4	1.7	3.2	131	99	167	13	1.5	3.0
8	.67	1.1	1.4	1.3	1.6	3.4	159	97	172	12	1.4	4.4
9	.48	1.0	1.3	1.4	1.6	3.6	138	91	184	9.8	1.8	4.6
10	.44	1.1	1.5	1.5	1.5	4.3	88	145	206	9.2	1.6	5.7
11	.36	1.2	1.5	1.5	1.4	4.5	92	167	221	11	1.5	5.8
12	.32	1.3	1.5	1.5	1.4	4.4	125	164	200	10	1.4	5.9
13	.43	1.3	1.5	1.5	1.6	4.3	115	196	177	8.2	1.8	9.2
14	.49	1.3	1.6	1.3	1.2	4.1	118	265	193	6.1	2.5	11
15	.54	1.4	1.6	1.5	1.5	3.7	161	336	188	5.9	2.2	11
16	.55	1.4	1.5	1.5	1.5	3.6	165	378	177	6.2	1.1	14
17	.56	1.3	1.4	1.5	1.6	4.2	136	378	141	6.3	.49	13
18	.62	1.4	1.5	1.4	1.8	4.9	72	223	119	9.6	.40	7.8
19	.67	1.5	1.3	1.4	1.8	6.4	67	188	109	9.3	.41	6.3
20	.92	1.2	1.3	1.3	1.9	9.0	83	227	110	8.2	.36	5.5
21	1.2	1.2	1.2	1.3	2.2	12	112	255	99	8.1	.43	5.2
22	1.4	1.4	1.4	1.4	2.2	18	71	260	84	6.5	.93	5.0
23	1.6	1.4	1.4	1.3	2.3	22	60	287	73	5.5	1.5	3.4
24	1.6	1.4	1.5	1.4	2.4	26	86	289	64	5.6	1.3	2.4
25	1.7	1.5	1.5	1.5	2.2	24	129	260	57	6.5	.76	2.2
26	1.6	1.5	1.5	1.6	2.2	26	156	209	52	5.8	1.2	2.1
27	1.6	1.5	1.4	1.5	1.8	32	207	222	39	4.4	1.1	1.9
28	1.6	1.5	1.5	1.3	1.8	47	161	173	40	4.3	1.8	1.7
29	1.7	1.4	1.5	1.4	---	63	145	173	69	4.0	3.2	1.7
30	1.5	1.5	1.5	1.3	---	75	148	197	72	3.3	4.0	1.5
31	1.2	---	1.5	1.2	---	100	---	207	---	2.8	4.7	---
TOTAL	27.49	40.1	45.3	43.5	47.7	523.1	3502	6241	4059	341.6	50.28	163.4
MEAN	.89	1.34	1.46	1.40	1.70	16.9	117	201	135	11.0	1.62	5.45
MAX	1.7	1.5	1.6	1.6	2.4	100	207	378	221	47	4.7	14
MIN	.32	1.0	1.2	1.2	1.2	1.8	60	91	39	2.8	.36	1.5
AC-FT	55	80	90	86	95	1040	6950	12380	8050	678	100	324

CAL YR 1977 TOTAL 1691.73 MEAN 4.63 MAX 53 MIN .00 AC-FT 3360
WTR YR 1978 TOTAL 15084.47 MEAN 41.3 MAX 378 MIN .32 AC-FT 29920

NOTE.--NO GAGE HEIGHT RECORD DEC. 5 TO JAN. 16.

PLATEAU CREEK BASIN

09105000 PLATEAU CREEK NEAR CAMEO, COLO.

LOCATION.--Lat 39°11'01", long 108°16'06", in NW¼SW¼ sec.18, T.10 S., R.97 W., Mesa County, Hydrologic Unit 14010005, on left bank 300 ft (91 m) from State Highway 65, 1.1 mi (1.8 km) upstream from mouth, and 4.0 mi (6.4 km) northeast of Cameo.

DRAINAGE AREA.--592 mi^2 (1,533 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to current year. Prior to May 1936, monthly discharge only, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1942. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,836 ft (1,474 m), from topographic map. Prior to Aug. 27, 1936, nonrecording gage.

REMARKS.--Records good except those for period of no gage-height record and those for winter period, which are fair. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 25,000 acres (101 km^2), return flow from irrigated areas, and for power development.

AVERAGE DISCHARGE.--43 years, 179 ft^3/s (5.069 m^3/s), 129,700 acre-ft/yr (160 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,580 ft^3/s (158 m^3/s) June 15, 1973, gage height, 7.99 ft (2.435 m); minimum daily, 8.2 ft^3/s (0.23 m^3/s) Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 788 ft^3/s (22.3 m^3/s) at 0900 May 17, gage height, 4.26 ft (1.298 m); maximum gage height from tape indicator, 4.45 ft (1.356 m) at 0230 June 12 (due to shifting control); minimum daily, 15.0 ft^3/s (0.42 m^3/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	32	38	39	43	52	246	225	399	181	41	48
2	15	34	41	37	40	78	215	206	416	149	41	46
3	16	36	44	39	41	77	153	208	383	134	41	48
4	17	33	47	38	41	65	127	227	420	124	58	49
5	16	31	49	40	40	62	133	220	433	118	41	52
6	20	37	47	40	42	86	122	214	377	112	41	53
7	46	34	48	38	43	67	148	201	368	106	45	53
8	25	32	53	40	45	58	214	189	393	96	50	76
9	24	34	48	41	45	57	301	202	449	83	55	54
10	24	36	42	42	48	59	172	236	553	84	59	51
11	24	38	41	43	56	56	171	253	604	92	58	50
12	25	39	47	42	45	61	205	261	579	87	40	53
13	26	39	50	42	41	63	190	315	498	84	45	57
14	27	37	54	42	40	52	172	423	518	75	54	69
15	25	36	67	47	41	44	217	565	464	71	54	85
16	24	37	49	50	39	42	233	659	442	71	60	87
17	25	41	37	47	38	49	217	696	333	72	64	95
18	24	40	49	48	37	58	152	521	262	79	51	101
19	25	41	47	44	37	59	142	428	233	79	45	102
20	25	40	45	48	41	56	144	439	226	81	45	101
21	27	39	43	46	40	59	176	481	220	67	54	97
22	28	38	42	44	38	90	147	490	211	66	55	79
23	26	38	52	44	39	88	130	518	211	63	59	78
24	26	39	63	45	40	71	135	545	210	63	74	75
25	26	43	60	42	43	66	175	522	209	65	64	73
26	26	42	52	44	45	61	219	455	206	65	49	71
27	26	42	61	44	56	62	312	467	184	63	47	69
28	26	38	61	43	53	68	278	401	162	59	47	67
29	27	36	56	44	---	77	241	374	185	43	45	64
30	36	36	50	43	---	90	247	435	206	41	45	65
31	37	---	44	43	---	112	---	478	---	40	46	---
TOTAL	780	1118	1527	1329	1197	2045	5734	11854	10354	2613	1593	2068
MEAN	25.2	37.3	49.3	42.9	42.8	66.0	191	382	345	84.3	51.4	68.9
MAX	46	43	67	50	56	112	312	696	604	181	74	102
MIN	15	31	37	37	37	42	122	189	162	40	40	46
AC-FT	1550	2220	3030	2640	2370	4060	11370	23510	20540	5180	3160	4100

CAL YR 1977 TOTAL 13825.5 MEAN 37.9 MAX 112 MIN 8.2 AC-FT 27420
WTR YR 1978 TOTAL 42212.0 MEAN 116 MAX 696 MIN 15 AC-FT 83730

09105000 PLATEAU CREEK NEAR CAMEO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1971 to March 1975.
WATER TEMPERATURES: October 1971 to March 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos Oct. 17, Dec. 10, 1973; minimum daily, 190 micromhos June 15, 1973.
WATER TEMPERATURES: Maximum, 28.0°C July 13, 14, 1974; minimum, freezing point on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
17...	1330	24	780	8.2	11.5	9.6	300	0	47
DEC									
07...	1330	48	580	--	2.0	--	300	4	59
JAN									
19...	1215	44	920	8.1	1.0	12.2	310	8	62
FEB									
15...	1130	41	760	8.5	2.5	13.4	300	7	60
APR									
27...	1015	205	310	8.1	10.5	8.9	120	0	31
JUL									
24...	1400	55	560	8.5	23.5	8.4	220	0	45

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT									
17...	44	84	2.1	6.5	390	0	320	130	10
DEC									
07...	37	73	1.8	5.6	360	--	300	120	8.8
JAN									
19...	38	77	1.9	5.2	370	0	300	130	21
FEB									
15...	37	75	1.9	4.9	360	0	300	140	9.4
APR									
27...	11	19	.7	2.9	170	0	140	31	3.0
JUL									
24...	26	47	1.4	4.9	290	11	260	69	5.2

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT									
17...	.6	24	538	.73	35.2	.00	.00	60	20
DEC									
07...	.5	28	511	.70	66.2	.29	.00	40	20
JAN									
19...	.6	26	544	.74	64.9	.39	.03	60	30
FEB									
15...	.5	24	529	.72	59.1	.13	.01	170	40
APR									
27...	.2	12	196	.27	108	.39	.05	70	10
JUL									
24...	.4	23	375	.51	55.7	.04	.01	30	10

09106104 KIEFER EXTENSION GRAND VALLEY CANAL NEAR FRUITA, CO

LOCATION.--Lat 39°13'31", long 108°46'28", in SW¼SW¼ sec.24, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 300 ft (91 m) upstream from small timber bridge, 1,050 ft (320 m) upstream from Golden Hill Canal headgate, 1,100 ft (340 m) north of O Road, and 5.0 mi (8.0 km) north of Fruita.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,595 ft (1,401 m), from topographic map.

REMARKS.--Records good. Grand Valley Canal diverts water from Colorado River in SE¼NE¼ sec.3, T.1 S., R.2 E. Water flowing past this gage is used for irrigation in Reed Wash basin. Entire flow is regulated by diversion gates. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 152 ft³/s (4.30 m³/s), June 2, 1977; no flow for part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	103	.00	.00	.00	.00	.00	123	133	127	128	137
2	137	28	.00	.00	.00	.00	.00	122	130	127	130	136
3	130	.30	.00	.00	.00	.00	.00	127	133	124	132	138
4	133	.00	.00	.00	.00	.00	.00	131	135	124	133	139
5	133	.00	.00	.00	.00	.00	.00	136	137	125	135	135
6	132	.00	.00	.00	.00	.00	.00	137	139	128	132	135
7	133	.00	.00	.00	.00	.00	.00	141	144	128	132	134
8	139	.00	.00	.00	.00	.00	.00	141	145	129	131	142
9	137	.00	.00	.00	.00	.00	.00	136	144	121	124	137
10	134	.00	.00	.00	.00	.00	.00	133	140	119	124	134
11	130	.00	.00	.00	.00	.00	.00	129	140	131	128	140
12	130	.00	.00	.00	.00	.00	49	125	135	136	131	138
13	130	.00	.00	.00	.00	.00	96	124	134	138	134	135
14	124	.00	.00	.00	.00	.00	98	127	135	141	133	133
15	126	.00	.00	.00	.00	.00	100	132	137	140	136	131
16	137	.00	.00	.00	.00	.00	100	130	140	137	133	132
17	131	.00	.00	.00	.00	.00	102	129	143	135	133	136
18	128	.00	.00	.00	.00	.00	99	133	139	136	135	137
19	130	.00	.00	.00	.00	.00	97	127	135	131	132	135
20	132	.00	.00	.00	.00	.00	97	129	131	134	125	134
21	130	.00	.00	.00	.00	.00	111	130	133	127	124	133
22	130	.00	.00	.00	.00	.00	117	131	129	123	131	134
23	126	.00	.00	.00	.00	.00	113	128	125	125	133	131
24	119	.00	.00	.00	.00	.00	111	130	122	127	139	133
25	119	.00	.00	.00	.00	.00	115	127	125	124	133	133
26	122	.00	.00	.00	.00	.00	117	130	122	124	131	132
27	121	.00	.00	.00	.00	.00	121	133	121	126	137	129
28	118	.00	.00	.00	.00	.00	119	131	125	126	136	131
29	119	.00	.00	.00	---	.00	118	131	130	126	129	132
30	127	.00	.00	.00	---	.00	121	133	127	126	126	131
31	119	---	.00	.00	---	.00	---	134	---	133	133	---
TOTAL	3994	131.30	.00	.00	.00	.00	2001.00	4050	4008	3998	4073	4037
MEAN	129	4.38	.000	.000	.000	.000	66.7	131	134	129	131	135
MAX	139	103	.00	.00	.00	.00	121	141	145	141	139	142
MIN	118	.00	.00	.00	.00	.00	.00	122	121	119	124	129
AC-FT	7920	260	.00	.00	.00	.00	3970	8030	7950	7930	8080	8010

CAL YR 1977 TOTAL 26738.30 MEAN 73.3 MAX 152 MIN .00 AC-FT 53040
WTR YR 1978 TOTAL 26292.30 MEAN 72.0 MAX 145 MIN .00 AC-FT 52150

09106108 KIEFER EXTENSION GRAND VALLEY CANAL NEAR LOMA, CO

LOCATION.--Lat 39°13'40", long 108°49'06", in NW¼SE¼ sec.21, T.2 N., R.3 S., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on left bank 600 ft (180 m) south of "O½" Road, 1,800 ft (550 m) west of 13 Road, and 2.5 mi (4.0 km) north of Loma.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,585 ft (1,398 m), from topographic map.

REMARKS.--Records good. Grand Valley Canal diverts water from Colorado River in SE¼NE¼ sec.3, T.1 S., R.2 E. Water flowing past this gage is used for irrigation in lower Reed Wash basin. Surplus flows are wasted into Reed Wash. Entire flow regulated by diversion gages. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 85 ft³/s (2.41 m³/s), May 15, 25, 1977; no flow part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	37	.00	.00	.00	.00	.00	69	81	79	75	74
2	74	10	.00	.00	.00	.00	.00	67	80	81	76	77
3	72	.30	.00	.00	.00	.00	.00	70	80	81	80	72
4	74	.00	.00	.00	.00	.00	.00	69	80	79	78	72
5	77	.00	.00	.00	.00	.00	.00	70	80	81	77	70
6	77	.00	.00	.00	.00	.00	.00	71	79	82	74	74
7	78	.00	.00	.00	.00	.00	.00	72	80	82	73	72
8	77	.00	.00	.00	.00	.00	.00	74	81	82	76	74
9	77	.00	.00	.00	.00	.00	.00	74	81	77	79	71
10	74	.00	.00	.00	.00	.00	.00	72	79	77	74	64
11	74	.00	.00	.00	.00	.00	.00	70	76	82	72	67
12	75	.00	.00	.00	.00	.00	19	70	77	82	72	67
13	74	.00	.00	.00	.00	.00	50	72	77	83	77	69
14	73	.00	.00	.00	.00	.00	48	77	78	82	76	68
15	73	.00	.00	.00	.00	.00	47	79	78	83	75	70
16	74	.00	.00	.00	.00	.00	48	73	77	83	73	69
17	75	.00	.00	.00	.00	.00	49	75	77	81	71	65
18	73	.00	.00	.00	.00	.00	49	77	77	79	75	63
19	74	.00	.00	.00	.00	.00	52	75	78	75	73	61
20	76	.00	.00	.00	.00	.00	51	77	80	71	69	62
21	77	.00	.00	.00	.00	.00	52	76	80	69	52	61
22	78	.00	.00	.00	.00	.00	57	77	75	68	66	63
23	75	.00	.00	.00	.00	.00	60	74	72	73	73	63
24	73	.00	.00	.00	.00	.00	64	74	73	75	73	65
25	73	.00	.00	.00	.00	.00	65	77	76	74	75	64
26	75	.00	.00	.00	.00	.00	65	82	76	74	73	65
27	67	.00	.00	.00	.00	.00	65	81	75	76	77	67
28	65	.00	.00	.00	.00	.00	65	80	77	75	77	69
29	65	.00	.00	.00	---	.00	66	80	78	74	75	68
30	67	.00	.00	.00	---	.00	67	80	80	75	72	66
31	59	---	.00	.00	---	.00	---	79	---	77	74	---
TOTAL	2269	47.30	.00	.00	.00	.00	1039.00	2313	2338	2412	2292	2032
MEAN	73.2	1.58	.000	.000	.000	.000	34.6	74.6	77.9	77.8	73.9	67.7
MAX	78	37	.00	.00	.00	.00	67	82	81	83	80	77
MIN	59	.00	.00	.00	.00	.00	.00	67	72	68	52	61
AC-FT	4500	94	.00	.00	.00	.00	2060	4590	4640	4780	4550	4030

CAL YR 1977 TOTAL 16250.30 MEAN 44.5 MAX 85 MIN .00 AC-FT 32230
WTR YR 1978 TOTAL 14742.30 MEAN 40.4 MAX 83 MIN .00 AC-FT 29240

09106200 LEWIS WASH NEAR GRAND JUNCTION, CO

LOCATION.--Lat 39°03'38", long 108°28'38", in NW¼NW¼ sec.22, T.1 S., R.1 E., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on left bank at upstream side of bridge on 31 Road, 700 ft (210 m) upstream from mouth, and 4.5 mi (7.2 km) east of city hall in Grand Junction.

DRAINAGE AREA.--4.72 mi^2 (12.22 km^2).

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,610 ft (1,405 m), from topographic map.

REMARKS.--Records good, except for periods of no gage-height record, which are fair. Flow is mostly return flow and waste water from lands irrigated under the Government Highline Canal and Price and Stub ditches. At times overflow from water delivered by the Grand Valley Canal to Mesa County ditch flows past station.

AVERAGE DISCHARGE.--5 years (water years 1974-78), 8.44 ft^3/s (0.239 m^3/s), 6,110 acre-ft/yr (7.53 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152 ft^3/s (4.30 m^3/s) Sept. 7, 1978, gage height, 4.17 ft (1.271 m), from rating curve extended above 116 ft^3/s (3.29 m^3/s); minimum daily, 0.20 ft^3/s (0.006 m^3/s) Nov. 7, 1976, Mar. 16-19, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 152 ft^3/s (4.30 m^3/s) at 1900 Sept. 7, gage height, 4.17 ft (1.271 m); minimum daily, 0.20 ft^3/s (0.006 m^3/s) Mar. 16-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.8	.97	.53	.42	.35	.35	15	19	9.7	9.2	9.1
2	12	1.8	.93	.51	.42	.37	.38	13	19	10	7.7	8.5
3	11	1.5	.71	.51	.42	.39	.32	11	17	10	7.5	9.3
4	12	1.4	.77	.51	.42	.36	.30	14	20	10	7.8	8.9
5	12	1.4	.84	.51	.42	.36	.33	17	21	10	7.9	9.2
6	13	1.5	.84	.51	.42	.42	.32	10	19	10	7.7	9.2
7	15	1.6	.84	.51	.42	.26	.30	11	17	9.8	8.5	29
8	18	1.5	5.0	.44	.42	.25	.28	12	17	9.7	8.2	58
9	15	1.3	7.4	.42	.42	.25	1.5	18	17	9.7	9.1	26
10	14	1.3	7.4	.42	.42	.25	.43	14	16	8.2	9.6	18
11	16	1.3	7.4	.42	.55	.30	3.2	11	16	7.5	8.6	12
12	13	1.3	7.3	.42	.46	.30	7.6	8.2	16	7.5	9.6	11
13	13	1.3	7.2	.42	.43	.63	8.2	9.6	13	7.7	13	9.8
14	14	1.3	7.2	.42	.42	.33	8.1	7.3	12	8.0	15	9.5
15	13	1.3	4.4	.43	.42	.26	8.2	7.0	11	8.3	14	10
16	13	1.3	1.9	.54	.42	.20	9.1	10	13	9.3	13	11
17	13	1.3	1.2	.51	.42	.20	8.7	16	13	9.4	13	10
18	12	1.3	1.1	.46	.36	.20	8.3	25	13	14	13	9.6
19	10	1.3	.88	.42	.36	.20	8.4	24	11	18	13	9.4
20	8.9	1.2	.80	.42	.36	.23	8.7	22	9.0	19	14	8.2
21	8.8	1.1	.71	.42	.36	.25	6.8	22	8.6	16	13	8.1
22	9.5	1.1	.71	.42	.36	.40	4.6	22	8.0	15	13	8.2
23	6.0	1.3	.71	.43	.36	.40	4.1	24	7.9	11	12	8.1
24	5.3	1.2	.71	.53	.36	.36	4.2	24	8.1	9.9	11	8.6
25	5.1	1.1	.71	.42	.36	.37	3.3	24	8.4	9.9	9.9	10
26	5.0	1.1	.61	.42	.36	.36	3.8	24	9.2	11	8.6	11
27	4.8	1.1	.60	.42	.30	.36	7.3	22	9.4	10	7.3	11
28	4.8	1.2	.60	.42	.30	.30	11	21	9.4	11	6.8	11
29	6.0	.99	.60	.42	---	.30	13	21	9.4	11	8.0	11
30	8.3	.97	.77	.42	---	.27	17	21	9.6	10	9.2	9.6
31	7.9	---	.60	.42	---	.26	---	19	---	9.5	9.1	---
TOTAL	332.4	43.16	72.41	14.07	11.16	9.74	158.11	519.1	397.0	330.1	317.3	382.3
MEAN	10.7	1.44	2.34	.45	.40	.31	5.27	16.7	13.2	10.6	10.2	12.7
MAX	18	5.8	7.4	.54	.55	.63	17	25	21	19	15	58
MIN	4.8	.97	.60	.42	.30	.20	.28	7.0	7.9	7.5	6.8	8.1
AC-FT	659	86	144	28	22	19	314	1030	787	655	629	758

CAL YR 1977 TOTAL 2097.52 MEAN 5.75 MAX 23 MIN .29 AC-FT 4160
WTR YR 1978 TOTAL 2586.85 MEAN 7.09 MAX 58 MIN .20 AC-FT 5130

09108500 TAYLOR PARK RESERVOIR AT TAYLOR PARK, CO

LOCATION.--Lat 38°49'07", long 106°36'24", Gunnison County, Hydrologic Unit 14020001, at dam on Taylor River just downstream from Taylor Park, 16 mi (26 km) northeast of Almont.

DRAINAGE AREA.--254 mi² (658 km²).

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1938, published in WSP 1313.

REVISED RECORDS.--WSP 1089: 1940(m), 1942(M), 1945-46. WSP 1924: Drainage area.

GAGE.--Nonrecording gage read once or twice daily. Datum of gage is 9,187 ft (2,800.2 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by an earth and rockfill dam. Dam completed by U.S. Bureau of Reclamation in September 1937. Capacity of reservoir, 106,200 acre-ft (131 hm³) between elevations 9,187 ft (2,800.2 m), bottom of outlet gates, and 9,330 ft (3,843.8 m), crest of spillway. No dead storage. Water used for irrigation in Uncompahgre Valley. Figures given are usable contents.

COOPERATION.--Records furnished by Uncompahgre Valley Water Users Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 111,000 acre-ft (137 hm³) July 1, 1957, elevation, 9,332.35 ft (2,844.500 m); minimum after first filling, 8,780 acre-ft (10.8 hm³) Oct. 19, 20, 1956, elevation, 9,240.70 ft (2,816.565 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 81,210 acre-ft (100 hm³) July 22-30, elevation, 9,316.70 ft (2,839.730 m); minimum, 27,480 acre-ft (33.9 hm³), Apr. 17-19, elevation, 9,273.40 ft (2,826.532 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 1800, WATER YEAR OCTOBER 1977 TO SPETEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	9,292.00	45,190	-
Oct. 31.	9,290.90	43,880	-1,310
Nov. 30.	9,287.80	40,290	-3,590
Dec. 31.	9,284.40	36,700	-3,590
CAL YR 1977	-	-	-24,010
Jan. 31.	9,281.60	34,160	-2,540
Feb. 28.	9,279.10	32,100	-2,060
Mar. 31.	9,275.00	28,770	-3,330
Apr. 30.	9,274.90	28,690	-80
May 31.	9,285.60	37,900	+9,210
June 30.	9,313.00	74,900	+37,000
July 31.	9,316.60	81,040	+6,140
Aug. 31.	9,314.00	76,590	-4,450
Sept. 30.	9,305.80	63,090	-13,500
WTR YR 1978	-	-	+17,900

09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO

LOCATION.--Lat 38°49'06", long 106°36'31", Gunnison County, Hydrologic Unit 14020001, on left bank 1,000 ft (300 m) downstream from Taylor Park Reservoir Dam, 3.4 mi (5.5 km) upstream from Lottis Creek, and 17 mi (27 km) northeast of Almont.

DRAINAGE AREA.--254 mi² (658 km²).

PERIOD OF RECORD.--June 1929 to September 1934 (monthly discharges only, published in WSP 1313). October 1938 to current year.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 9,169.67 ft (2,794.915 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 11, 1952, at site 1,600 ft (490 m) downstream at datum 1.00 ft (0.305 m) lower. Oct. 15, 1946, to May 4, 1952, supplementary nonrecording gage just downstream from reservoir outlet at different sites and datums used during winter months.

REMARKS.--Records good. Flow regulated by Taylor Park Reservoir (station 09108500) since 1937. One small diversion for irrigation from Willow Creek above reservoir. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years (water years 1930-34), 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr); 40 years (water years 1939-78), 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (171 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,270 ft³/s (64.3 m³/s) July 1, 1957, gage height, 7.56 ft (2.304 m); no flow May 1 to July 3, 1940, May 7-22, 1942, May 5-21, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 292 ft³/s (8.27 m³/s) Sept. 9, gage height, 4.12 ft (1.256 m); minimum daily, 51 ft³/s (1.444 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	109	107	106	94	107	115	118	209	260	180	179
2	137	109	107	106	92	107	115	117	232	260	194	180
3	110	109	107	106	94	107	115	117	233	260	195	178
4	82	109	107	106	92	109	115	116	234	260	195	178
5	59	109	107	106	92	109	116	126	237	261	194	198
6	51	109	107	107	91	109	115	136	233	262	192	241
7	55	109	107	106	91	109	115	132	230	261	187	270
8	57	109	106	106	89	109	114	130	231	261	188	279
9	58	109	107	106	89	109	114	130	232	261	189	285
10	58	109	107	106	89	111	114	129	234	262	189	282
11	58	109	107	106	89	111	114	129	235	263	190	283
12	58	109	107	106	89	111	114	129	236	263	190	282
13	58	109	107	106	89	111	114	129	238	262	190	280
14	58	108	106	106	96	111	113	130	239	239	191	279
15	58	109	106	104	104	111	112	158	252	198	190	276
16	58	109	107	104	104	111	113	183	259	192	190	277
17	58	108	107	102	104	113	113	184	260	191	190	275
18	58	108	107	102	106	113	113	185	262	192	190	275
19	58	108	107	100	106	113	113	185	263	192	190	275
20	68	107	106	102	106	113	114	185	264	192	189	273
21	93	107	106	100	106	113	116	186	265	192	190	272
22	109	107	106	100	106	113	116	186	266	198	192	269
23	109	107	107	99	106	113	116	187	266	189	181	269
24	109	107	107	99	106	115	116	190	268	185	179	264
25	109	107	107	97	107	115	116	191	269	197	177	257
26	109	107	106	97	107	115	116	190	270	198	177	258
27	109	107	106	97	107	116	117	177	270	192	175	256
28	109	107	106	97	107	115	116	177	271	180	170	257
29	109	107	106	96	---	116	118	178	266	181	182	255
30	109	107	107	96	---	116	118	178	260	180	180	255
31	109	---	107	94	---	115	---	185	---	180	181	---
TOTAL	2612	3244	3307	3171	2758	3466	3446	4873	7484	6864	5787	7657
MEAN	84.3	108	107	102	98.5	112	115	157	249	221	187	255
MAX	172	109	107	107	107	116	118	191	271	263	195	285
MIN	51	107	106	94	89	107	112	116	209	180	170	178
AC-FT	5180	6430	6560	6290	5470	6870	6840	9670	14840	13610	11480	15190

CAL YR 1977 TOTAL 42656 MEAN 117 MAX 215 MIN 51 AC-FT 84610
WTR YR 1978 TOTAL 54669 MEAN 150 MAX 285 MIN 51 AC-FT 108400

09110000 TAYLOR RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'41", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 15 ft (5 m) downstream from bridge on State Highway 306, and 800 ft (240 m) upstream from confluence with East River.

DRAINAGE AREA.--477 mi² (1,235 km²).

PERIOD OF RECORD.--July 1910 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1911. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,010.76 ft (2,441.680 m), National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1922, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Flow regulated since September 1937 by Taylor Park Reservoir (station 09108500), 24 mi (39 km) above station. Diversions for irrigation of about 360 acres (1.46 km²) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--68 years, 333 ft³/s (9.431 m³/s), 241,300 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,760 ft³/s (106 m³/s) June 9, 1920, gage height, 5.00 ft (1.524 m), from rating curve extended above 2,300 ft³/s (65 m³/s); maximum gage height, 5.32 ft (1.622 m) July 1, 1957; minimum discharge observed before storage began in Taylor Park Reservoir, 50 ft³/s (1.42 m³/s) for several days in August 1913, gage height, 1.2 ft (0.366 m); minimum daily, 24 ft³/s (0.68 m³/s) Mar. 12, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 978 ft³/s (27.7 m³/s) at 0300 June 16, gage height, 3.29 ft (1.003 m); minimum daily, 96 ft³/s (2.72 m³/s) Oct. 12, 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	146	141	130	131	125	166	214	577	528	291	260
2	178	150	140	135	133	128	161	206	652	502	287	257
3	148	156	135	139	135	129	164	206	657	480	288	255
4	131	156	127	139	137	125	164	215	683	462	287	252
5	108	158	129	140	134	130	166	211	686	448	283	259
6	101	159	128	146	133	132	163	220	653	437	284	298
7	127	161	130	149	133	132	168	216	661	428	289	342
8	114	158	130	149	133	132	181	212	676	419	286	363
9	102	154	129	141	132	135	190	209	706	419	285	367
10	101	165	125	135	132	135	177	219	798	416	286	368
11	99	157	128	135	131	133	173	245	856	418	284	367
12	96	157	130	139	131	125	182	265	852	417	296	363
13	98	154	136	140	130	122	186	290	852	405	300	364
14	98	154	138	134	129	119	184	340	866	392	277	364
15	98	156	138	133	129	116	189	405	894	335	295	360
16	97	156	137	135	128	112	192	489	887	324	294	360
17	97	155	132	138	128	111	195	490	806	325	285	367
18	96	156	136	138	124	111	187	434	750	321	281	366
19	96	158	137	141	122	112	183	412	722	312	284	365
20	99	152	137	143	120	115	183	403	707	314	283	360
21	122	153	131	142	119	115	188	413	685	309	282	359
22	143	153	125	140	118	118	189	419	679	304	288	358
23	144	155	132	137	118	120	190	447	661	299	282	356
24	144	152	138	138	118	125	195	472	643	290	272	355
25	145	149	140	138	118	130	212	491	642	296	268	339
26	146	150	133	138	117	131	233	482	607	301	268	341
27	147	151	133	140	118	132	247	485	574	300	265	339
28	147	150	132	140	121	137	228	460	569	285	258	340
29	147	147	131	140	---	144	223	445	574	283	267	339
30	149	142	130	138	---	149	223	475	566	283	262	335
31	149	---	130	135	---	158	---	511	---	280	299	---
TOTAL	3869	4622	4118	4305	3552	3938	5682	11001	21141	11333	8716	10118
MEAN	125	154	133	139	127	127	189	355	705	366	281	337
MAX	202	165	141	149	137	158	247	511	894	528	300	368
MIN	96	142	125	130	117	111	161	206	566	280	258	252
AC-FT	7670	9170	8170	8540	7050	7810	11270	21820	41930	22480	17290	20070

CAL YR 1977 TOTAL 58579 MEAN 160 MAX 267 MIN 65 AC-FT 116200
WTR YR 1978 TOTAL 92395 MEAN 253 MAX 894 MIN 96 AC-FT 183300

NOTE.--NO GAGE-HEIGHT RECORD NOV. 21 TO MAR. 28.

09112500 EAST RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'51", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 200 ft (61 m) upstream from bridge on State Highway 135, and 400 ft (120 m) upstream from confluence with Taylor River.

DRAINAGE AREA.--289 mi² (749 km²).

PERIOD OF RECORD.--April to October 1905, July 1910 to September 1922, October 1934 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1911. WSP 1733: 1952. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,006.29 ft (2,440.317 m), National Geodetic Vertical Datum of 1929. Apr. 16 to Sept. 30, 1905, and July 27, 1910, to Apr. 30, 1922, nonrecording gages at bridge 200 ft (61 m) downstream at different datums. Oct. 1, 1934, to Sept. 22, 1954, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 7,400 acres (29.9 km²) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--56 years (water years 1911-22, 1935-78), 335 ft³/s (9.487 m³/s), 242,700 acre-ft/yr (299 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 6,500 ft³/s (184 m³/s) June 15, 1921, gage height, 6.6 ft (2.01 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85 m³/s); minimum daily, 19 ft³/s (0.54 m³/s) Aug. 13, 1913.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,130 ft³/s (88.6 m³/s) at 0900 June 16, gage height, 6.73 ft (2.051 m), only peak above base of 1,600 ft³/s (45 m³/s); minimum daily, 37 ft³/s (1.05 m³/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	41	47	54	56	52	138	413	1530	1590	407	150
2	39	39	43	53	57	49	141	382	1690	1480	386	147
3	39	45	47	52	60	50	142	385	1690	1380	362	144
4	41	43	50	52	59	49	136	447	1720	1270	341	132
5	41	41	41	54	57	47	149	381	1680	1140	322	124
6	49	45	50	56	55	47	136	349	1550	1040	305	121
7	109	52	48	59	54	45	144	320	1560	978	297	121
8	101	54	45	61	54	45	173	281	1620	948	291	127
9	89	53	45	63	60	46	190	245	1740	970	289	122
10	79	52	42	65	54	45	167	265	2050	975	279	118
11	75	51	45	60	54	46	167	329	2350	947	271	122
12	72	50	44	58	52	48	185	430	2360	943	265	118
13	60	50	43	57	51	48	197	568	2390	921	280	116
14	57	47	43	55	50	48	194	837	2510	848	275	107
15	57	47	43	53	44	48	209	1140	2560	807	264	106
16	57	45	43	53	49	47	214	1420	2820	794	242	106
17	57	43	43	54	49	46	224	1540	2470	874	225	108
18	54	47	44	56	48	45	197	1210	2170	815	213	107
19	54	47	44	60	46	46	195	1110	2070	743	208	105
20	54	41	42	59	44	47	200	1210	2130	705	203	106
21	54	47	40	56	42	48	230	1360	1980	667	202	94
22	52	50	39	56	44	49	243	1320	2030	614	196	88
23	52	54	38	55	47	53	230	1440	2040	551	202	91
24	50	54	38	56	50	56	261	1540	2040	512	189	93
25	47	52	37	56	51	57	337	1570	2150	489	183	94
26	45	52	39	55	53	58	416	1490	1970	464	182	94
27	45	50	44	54	52	63	506	1520	1710	437	177	94
28	45	47	46	55	52	67	486	1300	1650	421	173	96
29	43	47	49	55	---	79	445	1180	1670	435	168	103
30	43	47	52	56	---	92	439	1290	1700	444	160	100
31	45	---	55	56	---	112	---	1420	---	425	150	---
TOTAL	1746	1433	1369	1744	1444	1678	7091	28692	59600	25632	7709	3354
MEAN	56.3	47.8	44.2	56.3	51.6	54.1	236	926	1987	827	249	112
MAX	109	54	55	65	60	112	506	1570	2820	1590	407	150
MIN	39	39	37	52	42	45	136	245	1530	421	150	88
AC-FT	3460	2840	2720	3460	2860	3330	14060	56910	118200	50840	15290	6650

CAL YR 1977 TOTAL 36330 MEAN 99.5 MAX 524 MIN 35 AC-FT 72060
WTR YR 1978 TOTAL 141492 MEAN 388 MAX 2820 MIN 37 AC-FT 280600

09114500 GUNNISON RIVER NEAR GUNNISON, CO

LOCATION.--Lat 38°32'31", long 106°56'57", in NW¼NW¼ sec.2, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, on right bank 0.7 mi (1.1 km) downstream from Antelope Creek and 1.2 mi (1.9 km) west of Gunnison.

DRAINAGE AREA.--1,012 mi² (2,621 km²).

PERIOD OF RECORD.--October 1910 to December 1928, October 1944 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1911, 1916.

GAGE.--Water-stage recorder. Altitude of gage is 7,655 ft (2,333 m), from topographic map. Nov. 25, 1910, to Dec. 31, 1928, nonrecording gages (supplementary water-stage recorder Apr. 28, 1916, to June 17, 1918) at bridge about 0.6 mi (1.0 km) downstream at various datums. Oct. 1, 1944, to July 28, 1970, water-stage recorder at sites 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records good except those for ice effect and no gage-height period, which are poor. Flow regulated by Taylor Park Reservoir (station 09108500), 37 mi (60 km) above station. Diversions for irrigation of about 22,000 acres (89.0 km²) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--52 years (water years 1911-28, 1945-78), 754 ft³/s (21.35 m³/s) 546,300 acre-ft/yr (674 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 11,400 ft³/s (323 m³/s) June 13, 1918, gage height, 4.05 ft (1.234 m), site and datum then in use, from rating curve extended above 5,000 ft³/s (140 m³/s); minimum daily, 80 ft³/s (2.27 m³/s) Dec. 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,570 ft³/s (129 m³/s) June 16, gage height, 4.56 ft (1.390 m); minimum daily, 152 ft³/s (4.30 m³/s) Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	214	262	238	210	210	390	708	2190	2440	825	422
2	214	204	294	210	230	210	390	663	2530	2240	834	414
3	192	220	262	215	230	209	390	654	2570	2030	834	406
4	176	220	268	220	220	200	398	744	2630	1810	798	398
5	160	220	262	240	210	200	414	636	2740	1640	798	406
6	160	226	244	230	200	200	398	592	2570	1500	816	430
7	226	238	287	240	200	190	422	558	2530	1410	780	464
8	220	238	256	245	210	192	498	524	2610	1360	717	481
9	198	220	244	250	206	188	549	490	2690	1360	708	422
10	176	238	262	252	220	190	490	498	3220	1440	690	422
11	160	262	250	259	230	196	481	600	3700	1390	690	422
12	165	301	256	255	212	209	532	735	3740	1390	690	414
13	165	280	250	268	195	214	532	890	3920	1390	681	398
14	160	274	250	250	183	214	524	1260	3920	1370	654	398
15	160	274	256	262	190	214	558	1700	3900	1300	636	406
16	156	274	250	256	198	209	566	2100	4270	1240	645	414
17	152	274	256	244	170	214	549	2290	3700	1240	618	430
18	152	274	280	250	170	220	481	1760	3420	1240	609	430
19	156	280	256	226	192	214	456	1500	3680	1230	618	430
20	160	268	280	226	214	220	490	1600	3360	1200	592	447
21	165	268	260	226	204	226	540	1840	3080	1200	583	438
22	192	280	250	220	200	232	549	1860	3080	1200	540	430
23	204	280	250	220	200	238	524	2010	3000	1210	524	430
24	204	262	252	220	200	244	566	2190	3180	1180	498	430
25	204	274	248	204	200	244	708	2240	3160	1160	490	456
26	204	280	225	244	200	244	816	2110	2980	1110	481	438
27	204	280	210	238	200	256	950	2130	2570	1090	472	430
28	209	262	210	204	207	274	890	1870	2500	1020	456	438
29	209	250	210	250	---	287	807	1660	2610	992	438	447
30	214	268	230	256	---	301	762	1790	2670	950	438	456
31	220	---	242	238	---	350	---	1960	---	890	422	---
TOTAL	5763	7703	7812	7356	5701	7009	16620	42162	92720	42222	19575	12847
MEAN	186	257	252	237	204	226	554	1360	3091	1362	631	428
MAX	226	301	294	268	230	350	950	2290	4270	2440	834	481
MIN	152	204	210	204	170	188	390	490	2190	890	422	398
AC-FT	11430	15280	15500	14590	11310	13900	32970	83630	183900	83750	38830	25480

CAL YR 1977 TOTAL 94098 MEAN 258 MAX 654 MIN 150 AC-FT 186600
WTR YR 1978 TOTAL 267490 MEAN 733 MAX 4270 MIN 152 AC-FT 530600

09119000 TOMICHI CREEK AT GUNNISON, CO

LOCATION.--Lat 38°31'18", long 106°56'25", in NE¼SW¼ sec.11, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020003, on right bank 300 ft (91 m) downstream from highway bridge, 1.8 mi (2.9 km) southwest of Post Office in Gunnison, and 2.0 mi (3.2 km) upstream from mouth.

DRAINAGE AREA.--1,061 mi² (2,748 km²).

PERIOD OF RECORD.--November and December 1910 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharges only for some periods, published in WSP 1313. Published as "near Gunnison" 1910.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,628.58 ft (2,325.191 m), National Geodetic Vertical Datum of 1929. Nov. 25 to Dec. 24, 1910, nonrecording gage 300 ft (91 m) upstream at different datum. Apr. 20, 1938, to Oct. 2, 1940, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 24,000 acres (97.1 km²) above station. Water diverted above station by Larkspur ditch to Arkansas River basin since 1935 and by Tarbell ditch to Rio Grande basin since 1914 (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--41 years (water years 1938-78), 166 ft³/s (4.701 m³/s), 120,300 acre-ft/yr (148 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) June 8, 1957, gage height, 4.10 ft (1.250 m); maximum gage height, 4.18 ft (1.274 m) May 23, 1970; minimum daily discharge, 2.6 ft³/s (0.074 m³/s) Sept. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 799 ft³/s (22.6 m³/s) at 1700 June 15, gage height, 3.35 ft (1.024 m) from maximum stage indicator; minimum daily, 7.7 ft³/s (0.218 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	63	75	46	56	75	394	172	378	320	118	51
2	9.1	61	76	50	49	77	356	165	445	264	117	51
3	9.9	67	77	57	53	84	358	156	464	225	113	48
4	9.6	73	78	63	56	89	314	141	485	195	106	35
5	10	75	77	61	59	86	317	144	548	178	109	35
6	13	73	64	60	61	84	276	152	546	154	106	35
7	36	75	66	60	61	83	283	141	519	116	102	34
8	46	78	68	53	63	82	311	139	506	89	109	34
9	41	62	64	58	56	88	332	124	523	100	106	35
10	38	52	66	65	57	94	337	110	561	130	107	34
11	35	59	66	61	67	93	255	99	628	173	104	34
12	45	66	69	61	67	88	249	86	652	189	100	35
13	50	64	67	59	70	82	230	70	672	170	114	35
14	59	63	64	55	73	74	214	59	733	148	121	37
15	65	64	68	61	73	71	189	61	751	130	112	37
16	73	66	67	63	70	76	186	94	734	122	101	37
17	72	67	52	63	65	83	185	136	680	153	92	39
18	71	74	51	65	60	97	164	215	596	180	87	40
19	74	76	66	59	68	120	160	237	521	189	75	41
20	80	63	69	59	71	140	146	231	450	168	71	42
21	77	45	54	60	71	160	142	320	415	155	79	47
22	78	56	49	55	70	192	145	493	388	136	83	51
23	74	81	60	57	68	190	136	468	362	120	83	57
24	70	75	66	58	70	170	132	410	339	113	76	57
25	71	75	60	60	72	145	136	401	319	105	73	57
26	71	77	50	65	73	155	143	403	299	100	70	58
27	72	79	54	62	70	172	149	408	277	107	68	55
28	70	72	57	53	72	185	148	411	270	107	65	53
29	70	74	57	55	---	218	138	410	284	116	60	50
30	69	74	57	63	---	276	141	362	337	123	56	49
31	67	---	54	63	---	327	---	341	---	122	52	---
TOTAL	1633.3	2049	1968	1830	1821	3956	6666	7159	14682	4697	2835	1303
MEAN	52.7	68.3	63.5	59.0	65.0	128	222	231	489	152	91.5	43.4
MAX	80	81	78	65	73	327	394	493	751	320	121	58
MIN	7.7	45	49	46	49	71	132	59	270	89	52	34
AC-FT	3240	4060	3900	3630	3610	7850	13220	14200	29120	9320	5620	2580

CAL YR 1977 TOTAL 19412.9 MEAN 53.2 MAX 180 MIN 2.6 AC-FT 38510
WTR YR 1978 TOTAL 50599.3 MEAN 139 MAX 751 MIN 7.7 AC-FT 100400

NOTE.--NO GAGE-HEIGHT RECORD NOV. 30 TO MAR. 27.

09124500 LAKE FORK AT GATEVIEW, CO

LOCATION.--Lat 38°17'56", long 107°13'46", in SE¼NE¼ sec.29, T.47 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, on left bank at old village of Gateview, 25 ft (8 m) downstream from private bridge, 0.2 mi (0.3 km) upstream from Indian Creek, and 6.3 mi (10.1 km) upstream from waterline of Blue Mesa Reservoir at elevation 7,519 ft (2,291.8 m).

DRAINAGE AREA.--334 mi^2 (865 km^2).

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

REMARKS.--Water-stage recorder. Datum of gage is 7,827.66 ft (2,385.871 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, at datum 2.00 ft (0.610 m) higher, and Oct. 1, 1938, to Sept. 30, 1945, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 1,600 acres (6.48 km^2) above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--41 years, 234 ft^3/s (6.627 m^3/s) 169,500 acre-ft/yr (209 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,700 ft^3/s (76.5 m^3/s) June 29, 1957, gage height, 4.30 ft (1.311 m); minimum daily, 22 ft^3/s (0.62 m^3/s) Jan. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft^3/s (53.8 m^3/s) at 1200 June 16, gage height, 3.20 ft (0.975 m), only peak above base of 1,400 ft^3/s (40 m^3/s); minimum daily, 30.0 ft^3/s (0.85 m^3/s) Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	49	44	35	37	35	118	178	838	976	320	100
2	60	48	44	34	37	35	103	176	928	925	301	100
3	59	50	45	34	37	36	92	166	993	906	283	96
4	58	50	44	35	37	38	88	158	1010	847	255	92
5	58	49	43	35	36	40	89	155	902	762	231	89
6	59	50	42	36	37	41	87	144	907	734	216	85
7	87	58	42	36	37	40	89	141	910	698	203	88
8	80	57	42	37	37	41	98	121	915	688	191	91
9	71	46	41	38	37	41	108	112	1030	679	189	85
10	68	47	41	38	37	43	101	117	1090	724	185	81
11	66	48	41	39	36	44	96	121	1190	767	179	81
12	61	48	41	39	36	44	110	157	1290	744	185	79
13	59	49	40	38	35	43	125	200	1630	710	197	76
14	58	49	40	38	35	41	137	255	1660	681	181	76
15	57	50	40	38	35	39	129	408	1770	646	165	75
16	57	49	39	39	35	37	137	560	1730	658	153	74
17	56	48	40	40	35	36	140	616	1520	664	145	77
18	56	48	40	39	34	35	124	508	1360	709	137	76
19	55	48	38	38	34	39	116	421	1320	661	134	72
20	54	50	35	38	33	47	110	442	1410	609	129	72
21	55	40	34	38	32	52	118	533	1370	566	125	69
22	55	43	32	37	33	60	118	498	1440	531	141	69
23	55	44	33	36	35	68	113	545	1340	487	142	68
24	54	44	34	37	36	64	115	633	1390	453	134	68
25	53	43	32	37	36	62	132	643	1520	419	129	70
26	52	43	30	37	35	60	150	624	1410	393	127	69
27	51	44	32	37	34	66	194	654	1230	375	118	67
28	50	45	32	37	35	76	225	592	1160	368	109	67
29	50	45	33	38	---	98	184	542	1100	379	106	66
30	51	45	34	38	---	77	183	613	972	352	104	66
31	51	---	36	38	---	95	---	758	---	332	100	---
TOTAL	1819	1427	1184	1154	993	1573	3729	11791	37355	19443	5314	2344
MEAN	58.7	47.6	38.2	37.2	35.5	50.7	124	380	1245	627	171	78.1
MAX	87	58	45	40	37	98	225	758	1770	976	320	100
MIN	50	40	30	34	32	35	87	112	838	332	100	66
AC-FT	3610	2830	2350	2290	1970	3120	7400	23390	74090	38570	10540	4650

CAL YR 1977 TOTAL 32425 MEAN 88.8 MAX 569 MIN 28 AC-FT 64310
WTR YR 1978 TOTAL 88126 MEAN 241 MAX 1770 MIN 30 AC-FT 174800

NOTE.--NO GAGE HEIGHT RECORD JAN. 10 TO MAR. 28.

09124600 BLUE MESA RESERVOIR NEAR SAPINERO, CO

LOCATION.--Lat 38°27'13", long 107°20'00", in NW¼ sec.4, T.48 N., R.4 W., Gunnison County, Hydrologic Unit 14020002, in intake tower of Blue Mesa Dam, 0.5 mi (0.8 km) upstream from Pine Creek and 1.7 mi (2.7 km) west of Sapinero.

DRAINAGE AREA.--3,426 mi² (8,873 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by earth and rockfill dam. Storage began Oct. 26, 1965. Usable capacity, 829,600 acre-ft (1,020 hm³) between elevations 7,358.00 ft (2,242.718 m), sill of outlet gate, and 7,519.40 ft (2,291.913 m), top of radial spillway gates. Dead storage, 111,200 acre-ft (137 hm³). Reservoir is used for power development and to provide storage replacement to meet downstream requirements under the Colorado River Compact of 1922. Figures given are usable contents. Figures published prior to October 1969 were total contents.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 831,700 acre-ft (1,030 hm³) July 8, 1970, elevation, 7,519.64 ft (2,291.986 m); minimum since appreciable storage was attained, 187,800 acre-ft (232 hm³) Oct. 10-17, 1956, elevation, 7,424.35 ft (2,262.942 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 822,900 acre-ft (1,010 hm³) July 20, elevation, 7,518.68 ft (2,291.694 m); minimum, 214,200 acre-ft (264 hm³) Oct. 30, elevation, 7,430.50 ft (2,264.816 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,431.95	220,800	-
Oct. 31	7,430.54	214,400	-6,400
Nov. 30	7,432.98	225,500	+11,100
Dec. 31	7,435.07	235,200	+9,700
CAL YR 1977	-	-	-243,000
Jan. 31	7,435.91	239,200	+4,000
Feb. 28	7,435.15	235,600	-3,600
Mar. 31	7,437.54	247,100	+11,500
Apr. 30	7,445.84	289,500	+42,400
May 31	7,470.67	440,000	+150,500
June 30	7,511.42	758,000	+318,000
July 31	7,518.19	818,400	+60,400
Aug. 31	7,514.55	785,600	-32,800
Sept. 30	7,507.93	727,700	-57,900
WTR YR 1978	-	-	+506,900

09125400 MORROW POINT RESERVOIR NEAR CIMARRON, CO

LOCATION.--Lat 38°27'05", long 107°32'12", in NW¼ sec.4, T.48 N., R.6 W., Montrose County, Hydrologic Unit 14020002, in recorder house at Morrow Point Dam on Gunnison River, 2,000 ft (610 m) upstream from Cimarron River and 1.2 mi (1.9 km) northeast of Cimarron.

DRAINAGE AREA.--3,637 mi^2 (9,420 km^2).

PERIOD OF RECORD.--January 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by double-curvature thin concrete-arch dam. Storage began Jan. 24, 1968. Capacity, 121,200 acre-ft (149 hm^3) at elevation 7,165.00 ft (2,183.892 m), crest of dam. Dead storage, 165 acre-ft (203,000 hm^3) below elevation 6,808.00 ft (2,075.078 m), invert of steel liner in outlet works. Reservoir is used for power development. Figures given are usable contents.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 118,900 acre-ft (147 hm^3) May 19, 1970, elevation, 7,162.27 ft (2,183.060 m); minimum since appreciable storage was attained, 24,530 acre-ft (30.2 hm^3) Nov. 6, 1959, elevation, 6,988.10 ft (2,129.973 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 116,700 acre-ft (144 hm^3) May 16, elevation, 7,159.57 ft (2,182.237 m); 112,000 acre-ft (138 hm^3) Apr. 14, elevation, 7,153.78 ft (2,180.472 m).

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,156.46	114,200	-
Oct. 31	7,156.48	114,200	0
Nov. 30	7,156.64	114,300	+100
Dec. 31	7,156.16	113,900	-400
CAL YR 1977	-	-	-1,200
Jan. 31	7,156.75	114,400	+500
Feb. 28	7,155.91	113,700	-700
Mar. 31	7,157.15	114,700	+1,000
Apr. 30	7,156.81	114,400	-300
May 31	7,156.85	114,500	+100
June 30	7,155.56	113,400	-1,100
July 31	7,156.95	114,500	+1,100
Aug. 31	7,156.06	113,800	-700
Sept. 30	7,156.73	114,400	+600
WTR YR 1978	-	-	+200

09126000 CIMARRON RIVER NEAR CIMARRON, CO

LOCATION.--Lat 38°15'36", long 107°32'43", in NW¼NE¼ sec.8, T.46 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, on right bank 100 ft (30 m) upstream from Forest Service bridge, 0.6 mi (1.0 km) upstream from headgate on Cimarron ditch, 2.1 mi (3.4 km) downstream from Silver Jack Reservoir, and 13 mi (21 km) south of Cimarron.

DRAINAGE AREA.--66.6 mi^2 (172.5 km^2).

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1965, published as Cimarron Creek near Cimarron.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,631.48 ft (2,630.875 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1972, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Diversion above station through Owl Creek ditch into Uncompahgre River basin. Flow regulated by Silver Jack Reservoir, total capacity, 13,520 acre-ft (16.7 hm^3), 2.1 mi (3.4 km) upstream since Dec. 23, 1970. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1955-70), 88.6 ft^3/s (2.509 m^3/s), 64,190 acre-ft/yr (79.1 hm^3/yr), prior to completion of Silver Jack Reservoir; 8 years (water years 1971-78), 87.8 ft^3/s (2.486 m^3/s), 63,610 acre-ft/yr (78.4 hm^3/yr), subsequent to completion of Silver Jack Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft^3/s (50.7 m^3/s) June 28, 1957, gage height, 8.32 ft (2.536 m), site and datum then in use; no flow Dec. 24, 1970, to Jan. 9, 1971 (result of storage in Silver Jack Reservoir); minimum daily prior to construction of Silver Jack Reservoir, 8.0 ft^3/s (0.23 m^3/s) Dec. 27, 28, 1962, Jan. 13, 1963; minimum daily, 4.4 ft^3/s (0.12 m^3/s) Apr. 20, 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft^3/s (32.3 m^3/s) at 0300 June 16, gage height, 5.47 ft (1.667 m); minimum daily, 6.2 ft^3/s (0.18 m^3/s) Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	19	6.7	6.7	8.2	8.5	13	23	466	562	183	148
2	32	19	6.7	6.7	8.2	8.9	12	22	450	548	181	146
3	32	19	6.7	6.9	8.4	8.7	13	24	455	541	173	146
4	32	19	6.7	6.6	8.5	9.9	13	25	450	466	159	151
5	32	19	6.7	6.7	8.7	8.3	13	22	420	455	157	155
6	33	14	6.8	6.7	8.8	8.3	13	20	389	425	166	154
7	46	7.7	6.8	6.7	9.0	8.4	14	20	405	405	147	154
8	35	7.5	6.8	7.9	8.7	8.5	16	18	548	400	126	150
9	34	7.3	7.1	6.6	8.4	8.5	16	19	667	395	125	148
10	33	7.2	7.3	7.0	8.1	8.5	15	20	786	440	125	148
11	33	7.0	7.0	6.8	7.6	8.6	15	24	864	590	124	140
12	33	6.9	6.9	7.0	7.9	9.2	17	31	872	502	124	133
13	33	6.9	6.8	7.1	8.2	9.2	17	40	896	445	125	133
14	33	6.8	6.8	7.3	8.4	10	18	51	880	400	126	132
15	33	6.7	7.2	7.5	8.5	10	18	61	952	375	129	131
16	33	6.6	7.3	7.8	8.6	11	18	64	987	395	126	131
17	33	6.6	7.0	7.8	8.4	10	17	52	848	400	124	131
18	33	6.5	6.7	7.6	8.3	10	20	42	779	415	129	62
19	32	6.5	6.5	7.7	8.0	9.3	18	42	774	364	133	19
20	32	6.6	6.4	7.9	7.9	9.3	18	47	808	342	135	41
21	32	6.7	6.3	8.1	7.9	10	20	55	793	337	136	58
22	32	6.8	6.3	8.4	8.0	9.9	20	85	824	315	137	58
23	32	6.8	6.2	8.5	8.1	9.6	20	114	786	308	141	58
24	31	6.8	6.8	8.5	8.1	10	24	195	816	274	145	58
25	31	6.7	6.7	8.5	8.1	12	26	445	864	239	151	58
26	31	6.7	7.2	8.4	8.2	11	32	425	808	236	151	57
27	31	6.9	6.7	8.0	8.2	11	33	440	716	223	151	57
28	31	6.8	6.7	7.9	9.0	10	28	396	723	203	151	55
29	30	6.8	6.9	8.0	---	11	27	375	660	201	148	55
30	31	6.7	7.0	7.9	---	12	27	388	576	200	148	55
31	25	---	6.7	8.1	---	13	---	400	---	192	148	---
TOTAL	1006	273.5	210.4	233.3	232.4	302.6	571	3985	21262	11593	4444	3122
MEAN	32.5	9.12	6.79	7.53	8.30	9.76	19.0	129	709	374	143	104
MAX	46	19	7.3	8.5	9.0	13	33	445	987	590	183	155
MIN	25	6.5	6.2	6.5	7.6	8.3	12	18	389	192	124	19
AC-FT	2000	542	417	463	461	600	1130	7900	42170	22990	8810	6190

CAL YR 1977 TOTAL 14742.6 MEAN 40.4 MAX 119 MIN 4.4 AC-FT 29240
WTR YR 1978 TOTAL 47235.2 MEAN 129 MAX 987 MIN 6.2 AC-FT 93690

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO

LOCATION.--Lat 38°31'45", long 107°38'54", in NE¼NW¼ sec.10, T.49 N., R.7 W., Montrose County, Hydrologic Unit 14020002, on left bank 0.4 mi (0.6 km) downstream from east portal of Gunnison tunnel, 4.7 mi (7.6 km) downstream from Crystal Creek, and 12 mi (19 km) northeast of Montrose.

DRAINAGE AREA.--3,965 mi² (10,269 km²).

PERIOD OF RECORD.--October 1903 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at east portal of Gunnison tunnel" 1905-6 and as "at River portal" 1907-11.

REVISED RECORDS.--WSP 1313: 1906(M). WSP 1733: 1918-19, 1948. WSP 2124: Drainage area. WDR CO-77-2: 1926, 1941.

GAGE.--Water-stage recorder. Datum of gage is 6,526.06 ft (1,989.143 m) National Geodetic Vertical Datum of 1929. Apr. 9, 1905, to Aug. 20, 1915, nonrecording gage at site 300 ft (91 m) upstream from diversion dam at east portal of Gunnison tunnel at different datum. Aug. 21, 1915, to Jan. 19, 1943, nonrecording gage at site 500 ft (150 m) downstream from diversion dam at east portal of Gunnison tunnel at different datum. Jan. 20, 1943, to Sept. 30, 1956, water-stage recorder at present site at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, transbasin diversion through Gunnison tunnel for irrigation of about 75,000 acres (304 km²) in Uncompahgre Valley (see table below for figures of diversion), Taylor Park Reservoir (station 09108500), Blue Mesa Reservoir (station 09124600), Morrow Point Reservoir (station 09125400), Crystal Reservoir station, diversions for irrigation of about 63,000 acres (255 km²), and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through Gunnison tunnel; furnished by Uncompahgre Valley Water Users Association.

AVERAGE DISCHARGE.--75 years, 1,368 ft³/s (38.74 m³/s), 991,100 acre-ft/yr (1.220 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 19,000 ft³/s (538 m³/s) June 15, 1921, gage height, about 15.8 ft (4.81 m), present datum, from rating curve extended above 14,000 ft³/s (396 m³/s); no flow Sept. 25, 26, 1936, Oct. 8, 1949, Sept. 5, 6, 15, 16, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,530 ft³/s (100 m³/s) at 2000 June 29, gage height, 6.30 ft (1.920 m); minimum daily, 154 ft³/s (4.36 m³/s) Jan. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	270	317	317	520	526	219	193	324	1820	188	529
2	235	268	317	317	520	533	219	249	414	2060	252	464
3	234	268	317	317	520	534	216	250	474	1910	253	421
4	215	268	315	317	520	528	201	217	471	1830	241	539
5	211	268	315	317	517	526	241	221	479	1540	222	597
6	213	269	319	254	521	526	221	263	477	987	224	531
7	222	298	317	154	521	528	221	337	440	601	227	576
8	219	320	317	154	520	513	217	298	276	404	228	393
9	219	320	317	358	520	492	217	266	259	404	471	547
10	218	320	317	493	520	493	210	269	368	350	781	603
11	219	320	317	506	520	496	225	271	381	322	728	532
12	219	320	314	507	524	495	249	268	1090	321	571	535
13	241	317	313	504	528	492	265	272	1610	392	574	550
14	256	317	313	508	528	490	252	272	1610	299	593	626
15	250	317	310	511	528	482	286	294	1660	302	549	760
16	241	317	305	508	528	481	265	365	1820	302	546	709
17	231	317	303	508	528	484	260	865	1850	515	551	580
18	224	320	301	508	528	484	268	928	1580	990	552	722
19	215	320	299	508	528	484	274	714	1580	1580	519	746
20	211	319	298	512	529	445	289	308	1580	1580	528	763
21	210	317	299	512	491	344	279	262	1580	1590	596	789
22	209	317	299	515	528	242	252	271	1580	1570	515	865
23	212	317	301	512	528	235	232	383	1590	1590	537	916
24	212	317	303	515	528	233	203	367	1600	1170	563	731
25	236	314	303	512	525	230	198	504	1600	802	474	919
26	241	313	303	512	524	229	196	722	1660	785	554	941
27	240	313	303	514	542	229	196	824	1680	773	510	943
28	240	313	308	513	510	226	190	812	1720	786	430	666
29	239	313	311	516	---	215	194	821	2040	778	516	791
30	240	314	313	516	---	212	194	544	2550	791	431	816
31	268	---	317	518	---	220	---	325	---	388	438	---
TOTAL	7079	9201	9601	13733	14644	12647	6949	12955	36343	29532	14362	20100
MEAN	228	307	310	443	523	408	232	418	1211	953	463	670
MAX	268	320	319	518	542	534	289	928	2550	2060	781	943
MIN	209	268	298	154	491	212	190	193	259	299	188	393
AC-FT	14040	18250	19040	27240	29050	25090	13780	25700	72090	58580	28490	39870
a	24290	639	0	0	0	6160	50370	48710	40080	57090	58120	50470

CAL YR 1977 TOTAL 146208 MEAN 401 MAX 1620 MIN 148 AC-FT 290000
WTR YR 1978 TOTAL 187146 MEAN 513 MAX 2550 MIN 154 AC-FT 371200

a Diversions in acre-feet, through Gunnison Tunnel, furnished by Uncompahgre Valley Water Users Association.

09128500 SMITH FORK NEAR CRAWFORD, CO

LOCATION.--Lat 38°43'40", long 107°30'22", in SW¼SE¼ sec.24, T.15 S., R.91 W., Delta County, Hydrologic Unit 14020002, on left bank 20 ft (6 m) upstream from Forest Service bridge, 0.4 mi (0.6 km) upstream from Second Creek, 6 mi (10 km) northeast of Crawford, and 6.5 mi (10.5 km) upstream from Iron Creek.

DRAINAGE AREA.--43.7 mi² (113.2 km²).

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1941. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,091 ft (2,161 m), from topographic map. Prior to Nov. 16, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of a few small hay meadows above station. Saddle Mountain ditch diverts water above station for irrigation of about 800 acres (3.24 km²) below. One small ditch diverts water from Virginia Creek to Iron Creek drainage. Head and Ferrier ditch imports water from Curecanti Creek drainage. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--43 years, 40.3 ft³/s (1.141 m³/s), 29,200 acre-ft/yr (36.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 1,050 ft³/s (30 m³/s) June 6, 1957; maximum gage height, 6.02 ft (1.835 m) May 20, 1973; minimum daily discharge determined, 1.8 ft³/s (0.051 m³/s) July 30, 31, Aug. 1, 1963, Sept. 5, 6, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 260 ft³/s (7.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 15	2300	*531	15.0	5.61	1.710	June 10	2400	425	12.0	5.49	1.673
May 25	0100	402	11.4	5.41	1.649						

Minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.9	4.8	5.5	5.1	4.9	113	157	282	72	8.2	3.7
2	4.8	5.3	5.9	5.4	5.1	5.2	88	147	311	68	8.5	3.4
3	4.8	5.9	6.0	5.4	5.2	5.2	70	140	293	61	8.4	3.0
4	4.5	6.0	6.5	5.5	5.2	5.3	63	137	293	54	8.7	2.1
5	4.2	6.3	5.7	5.4	5.4	5.4	68	115	286	46	8.6	1.8
6	9.4	6.7	4.1	5.3	5.7	5.7	59	113	274	41	7.9	1.8
7	27	8.1	6.0	5.4	5.7	6.0	73	101	275	37	7.5	3.0
8	20	8.2	5.2	5.2	5.6	6.7	109	88	291	35	8.6	4.3
9	14	5.3	4.7	5.3	5.9	7.8	115	72	317	36	10	3.7
10	11	5.3	5.5	5.4	5.8	8.4	89	75	354	38	9.8	3.7
11	9.5	6.2	5.0	5.2	5.3	8.0	79	95	359	45	9.2	3.8
12	8.7	6.3	5.5	5.2	5.5	7.8	103	122	302	50	9.2	4.1
13	8.3	5.9	4.4	5.3	5.0	7.2	117	167	261	50	9.5	4.1
14	7.8	6.0	6.3	5.4	5.7	6.3	105	265	255	44	8.9	3.9
15	7.4	5.8	5.6	5.6	5.0	6.3	101	398	246	42	8.9	3.8
16	7.1	5.6	5.5	5.6	5.8	7.2	103	480	221	42	7.2	3.6
17	7.2	5.6	5.6	6.0	5.8	6.6	105	420	98	46	6.3	4.0
18	7.0	5.6	5.6	5.8	5.7	7.7	88	233	137	39	6.2	6.0
19	6.5	5.8	5.9	5.7	5.7	11	84	195	162	34	6.2	6.5
20	6.2	5.2	5.8	5.6	5.7	14	95	192	171	31	5.8	6.1
21	6.8	5.5	5.6	5.7	5.7	21	115	233	120	30	5.8	5.4
22	6.6	5.9	5.2	5.6	5.6	29	103	307	100	27	6.6	4.9
23	6.3	5.9	5.0	5.6	5.4	24	93	320	144	23	7.2	4.5
24	6.2	5.6	5.0	5.6	5.0	22	107	343	125	21	5.9	4.5
25	5.6	5.9	5.2	5.6	4.7	18	145	360	127	19	5.2	4.4
26	5.7	5.8	5.2	5.6	4.7	20	172	332	108	18	5.1	4.2
27	5.6	5.7	5.2	5.8	4.8	31	204	292	96	15	4.3	4.0
28	5.3	6.1	5.4	5.8	4.8	44	183	268	90	13	3.9	3.9
29	5.4	5.0	5.3	5.6	---	50	178	191	81	13	3.8	4.9
30	6.0	5.8	5.4	5.5	---	68	170	216	76	11	3.7	5.9
31	6.1	---	5.6	5.2	---	94	---	254	---	8.5	3.7	---
TOTAL	245.5	178.2	167.7	170.8	150.6	563.7	3297	6828	6255	1109.5	218.8	123.0
MEAN	7.92	5.94	5.41	5.51	5.38	18.2	110	220	209	35.8	7.06	4.10
MAX	27	8.2	6.5	6.0	5.9	94	204	480	359	72	10	6.5
MIN	4.2	5.0	4.1	5.2	4.7	4.9	59	72	76	8.5	3.7	1.8
AC-FT	487	353	333	339	299	1120	6540	13540	12410	2200	434	244

CAL YR 1977 TOTAL 3921.7 MEAN 10.7 MAX 40 MIN 2.6 AC-FT 7780
WTR YR 1978 TOTAL 19307.8 MEAN 52.9 MAX 480 MIN 1.8 AC-FT 38300

09129600 SMITH FORK NEAR LAZEAR, CO

LOCATION.--Lat 38°42'27", long 107°42'35", in SE¼NE¼ sec.31, T.15 S., R.92 W., Delta County, Hydrologic unit 14020004, on left bank 25 ft (8 m) downstream from bridge, 1.8 mi (2.9 km) upstream from Diamond Joe Gulch, and 6.4 mi (10.3 km) southeast of Lazear.

DRAINAGE AREA.--166 mi² (430 km²).

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,830 ft (1,777 m), from topographic map.

REMARKS.--Records good except those during periods of ice effect and those for period of no gage-height record, which are poor. Natural flow of stream affected by reservoirs, diversions into basin, diversions for irrigation, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft³/s (8.78 m³/s) May 17, 1978, gage height, 4.63 ft (1.411 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Aug. 12-14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 310 ft³/s (8.78 m³/s) at 1000 May 17, gage height, 4.63 ft (1.411 m); minimum daily, 0.63 ft³/s (0.018 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	1.9	2.1	1.6	1.9	2.0	45	3.7	123	12	1.7	.80
2	.73	1.9	3.5	1.5	1.9	2.2	27	2.9	145	12	1.2	.80
3	.85	2.0	3.5	1.6	1.8	2.6	11	3.0	158	12	1.2	.80
4	.92	2.0	3.4	1.7	1.8	2.6	4.0	6.4	226	11	1.0	.80
5	1.1	2.0	3.1	1.6	1.7	2.6	2.7	3.2	222	10	.96	.79
6	1.2	2.0	2.9	1.6	1.7	2.6	2.4	3.8	192	8.3	.56	.77
7	2.0	2.0	2.6	1.8	1.9	2.7	2.3	4.5	178	6.0	.53	1.1
8	1.3	2.0	2.5	1.7	1.7	2.5	14	4.0	180	5.0	.74	1.4
9	1.2	2.4	2.4	1.7	1.4	2.4	28	3.2	182	5.0	.73	.91
10	1.3	3.3	2.2	1.8	1.9	2.5	20	2.5	222	4.8	.75	1.0
11	1.6	2.2	2.4	1.8	2.1	2.5	6.7	2.1	251	4.6	.57	1.3
12	1.7	2.2	2.1	1.9	1.9	2.6	11	2.7	204	3.9	1.1	1.4
13	1.4	2.2	2.6	1.9	1.8	3.1	23	11	176	3.7	1.5	1.4
14	1.4	2.3	1.9	1.9	1.8	3.3	16	32	160	4.1	1.4	1.0
15	1.3	2.9	2.0	1.9	1.9	3.2	14	142	150	4.0	1.5	.66
16	1.1	2.9	2.1	2.1	1.9	3.1	8.4	244	150	3.8	1.5	.66
17	1.1	2.9	2.1	2.0	1.8	2.9	10	280	128	4.2	1.7	.92
18	1.1	2.9	2.0	2.0	1.8	2.9	2.7	166	96	3.7	1.7	1.3
19	1.3	2.9	4.9	2.6	1.8	2.9	2.6	68	82	2.9	1.7	1.3
20	1.6	3.1	1.8	2.1	2.0	3.1	3.9	66	76	2.5	1.5	1.4
21	1.7	2.9	1.6	2.1	2.5	3.3	3.5	80	60	2.4	1.5	1.5
22	1.3	2.9	1.6	2.1	2.7	3.6	3.2	145	49	2.4	1.5	1.5
23	1.3	2.1	1.6	2.1	2.6	3.6	2.3	195	45	2.2	1.8	1.5
24	1.5	1.1	1.7	2.0	2.4	3.7	2.0	221	38	1.8	2.4	1.5
25	1.6	1.1	1.7	1.9	2.0	3.7	3.2	221	33	1.7	2.5	1.5
26	1.6	1.1	1.7	2.0	2.0	3.8	4.8	169	28	2.7	2.5	1.4
27	1.4	1.1	1.6	2.1	2.0	3.9	17	143	23	2.4	2.4	1.4
28	1.3	1.1	1.6	2.0	2.1	3.8	11	112	18	2.6	2.1	1.4
29	1.3	1.1	1.7	2.1	---	3.2	6.9	80	9.0	2.5	2.2	1.4
30	1.4	1.1	1.7	2.1	---	1.5	8.1	84	10	2.2	2.2	1.3
31	1.6	---	1.7	2.0	---	17	---	106	---	2.0	1.4	---
TOTAL	40.87	63.6	67.3	59.3	54.8	105.4	316.7	2607.0	3616.0	148.4	46.84	34.91
MEAN	1.32	2.12	2.17	1.91	1.96	3.40	10.6	84.1	121	4.79	1.51	1.16
MAX	2.0	3.3	3.5	2.6	2.7	17	45	280	251	12	2.5	1.5
MIN	.67	1.1	1.6	1.5	1.4	1.5	2.0	2.1	9.0	1.7	.53	.66
AC-FT	81	126	133	118	109	209	628	5170	7170	294	93	69

CAL YR 1977 TOTAL 565.30 MEAN 1.55 MAX 5.3 MIN .10 AC-FT 1120
WTR YR 1978 TOTAL 7161.12 MEAN 19.6 MAX 280 MIN .63 AC-FT 14200

09131100 COW CREEK NEAR PAONIA, CO

LOCATION.--Lat 39°06'15", long 107°35'00", Delta County, Hydrologic Unit 14020004, on left bank 150 ft (46 m) downstream from road culvert, 1.8 mi (2.9 km) upstream from Beaver Creek, and 16 mi (26 km) north of Paonia.

DRAINAGE AREA.--12.0 mi² (31.1 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,060 ft (2,761 m), from topographic map. Prior to Nov. 9, 1974, at site 150 ft (46 m) upstream at different datum.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. Flow regulated by Overland Reservoir, capacity, 6,280 acre-ft (7.74 hm³). Diversions by Overland ditch 3.6 mi (5.8 km) above station for use outside drainage. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 7.32 ft³/s (0.207 m³/s), 5,300 acre-ft/yr (6.53 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 172 ft³/s (4.87 m³/s), June 14, 1975, gage height, 3.01 ft (0.917 m); maximum gage height, 6.95 ft (2.118 m), site and datum then in use, Oct. 4, 1974 (backwater from beaver dam); no flow June 20-24, July 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 168 ft³/s (4.76 m³/s) at 2000 June 11, gage height, 2.91 ft (0.887 m); minimum daily, 0.09 ft³/s (0.002 m³/s), Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	3.0	.50	.45	.43	.54	.86	4.0	48	17	.31	2.2
2	.30	3.1	.50	.38	.43	.54	.78	4.2	42	10	.24	.82
3	.99	3.1	.52	.38	.43	.56	.76	5.1	27	5.3	.67	.45
4	1.2	3.1	.58	.40	.44	.56	.82	5.5	25	14	.52	.32
5	.92	3.3	.60	.45	.45	.56	.90	5.3	24	1.5	.41	.28
6	.80	3.3	.60	.45	.45	.54	.88	4.7	24	1.4	.41	.25
7	1.2	3.2	.60	.42	.47	.54	.94	4.6	24	1.5	.34	.23
8	.61	3.2	.58	.38	.48	.56	1.1	4.3	23	1.6	.26	.21
9	.47	3.2	.57	.39	.48	.60	1.0	4.5	23	7.1	.84	.21
10	.32	3.1	.56	.42	.47	.64	.86	5.7	23	4.9	.50	.19
11	.19	3.0	.55	.45	.48	.62	.94	7.0	55	5.0	.94	.18
12	.11	2.8	.55	.46	.50	.57	1.0	8.9	110	4.9	.50	.17
13	.09	2.6	.55	.45	.50	.54	1.0	11	111	15	.60	.16
14	.30	2.6	.56	.42	.49	.50	1.0	14	112	16	.51	1.5
15	.56	2.6	.55	.42	.48	.50	1.0	17	125	15	.46	1.8
16	.46	2.7	.55	.44	.48	.50	1.1	19	81	5.7	.37	1.9
17	1.3	2.5	.55	.42	.44	.54	1.0	19	77	2.5	.43	2.2
18	2.7	1.2	.55	.38	.43	.60	1.2	19	83	1.4	.43	4.1
19	2.9	.67	.55	.38	.44	.74	1.4	19	95	.58	.43	4.8
20	3.0	.56	.52	.39	.45	.70	1.6	21	90	.55	.35	3.9
21	3.3	.51	.49	.41	.46	.74	2.2	37	78	.55	.49	5.3
22	3.4	.46	.48	.43	.50	.76	2.0	43	65	.55	.59	3.4
23	3.3	.46	.49	.44	.56	.68	2.0	49	61	.51	.57	3.4
24	3.2	.45	.50	.42	.58	.60	2.6	52	59	.47	.49	3.2
25	3.0	.46	.50	.37	.58	.62	3.4	51	58	.42	.49	2.8
26	3.0	.50	.48	.38	.60	.64	4.3	48	58	.36	.48	2.4
27	2.9	.48	.46	.40	.54	.70	5.3	44	59	.31	.27	2.1
28	2.8	.46	.44	.41	.54	.75	4.6	38	57	.39	.26	1.8
29	2.8	.49	.47	.40	---	.82	4.5	44	18	.43	.23	1.7
30	3.1	.50	.49	.42	---	.88	4.3	50	17	.42	.17	1.5
31	2.9	---	.48	.43	---	.88	---	48	---	.31	.10	---
TOTAL	52.57	57.60	16.37	12.84	13.58	19.52	55.34	706.8	1752	135.65	13.98	53.47
MEAN	1.70	1.92	.53	.41	.49	.63	1.84	22.8	58.4	4.38	.45	1.78
MAX	3.4	3.3	.60	.46	.60	.88	5.3	52	125	17	.94	5.3
MIN	.09	.45	.44	.37	.43	.50	.76	4.0	17	.31	.10	.16
AC-FT	104	114	32	25	27	39	110	1400	3480	269	28	106

CAL YR 1977 TOTAL 287.73 MEAN .79 MAX 14 MIN .00 AC-FT 571
WTR YR 1978 TOTAL 2889.72 MEAN 7.92 MAX 125 MIN .09 AC-FT 5730

NOTE.--NO GAGE-HEIGHT RECORD JAN. 18 TO APR. 17.

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO

LOCATION.--Lat 38°57'18", long 107°16'11", in SE¼NW¼ sec.6, T.1 S., R.88 W., Gunnison County, Hydrologic Unit 14020004, on right bank 300 ft (91 m) upstream from county bridge 0.1 mi (0.2 km) downstream from Munsey Creek, 5 mi (8.0 km) east of Paonia Reservoir Dam, and 10 mi (16 km) northeast of Somerset.

DRAINAGE AREA.--94.6 mi^2 (245.0 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,800 ft (2,073 m), from topographic map.

REMARKS.--Records poor. Natural flow of stream affected by small diversions for irrigation of hay meadows. Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 1,680 ft^3/s (47.6 m^3/s) May 16, 1978, gage height, 5.73 ft (1.746 m); minimum daily, 12 ft^3/s (0.340 m^3/s) Dec. 21, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 1,680 ft^3/s (47.6 m^3/s) at 2400 May 16, gage height, 5.73 ft (1.746 m), but may have been exceeded during period of no gage-height record in June. Maximum on May 16 only recorded peak above base of 500 ft^3/s (14.2 m^3/s); minimum daily, 12 ft^3/s (0.34 m^3/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	15	14	18	19	200	320	1120	700	108	34
2	17	16	16	13	17	21	160	310	1080	600	107	34
3	17	17	18	15	16	21	140	300	1050	520	100	32
4	16	17	18	18	16	19	123	290	1100	450	111	30
5	15	18	18	17	17	21	135	260	1050	400	99	30
6	25	19	15	17	19	22	115	259	950	360	95	29
7	45	23	19	17	18	20	145	202	950	340	91	29
8	35	23	16	17	17	23	210	182	1010	350	88	27
9	30	16	16	18	19	27	220	158	1050	360	85	26
10	25	16	16	18	18	28	185	203	1100	360	79	27
11	24	17	15	17	17	27	165	257	1150	350	75	28
12	23	19	16	17	17	26	200	321	1150	350	73	27
13	22	19	17	17	17	25	220	440	1150	350	73	26
14	22	18	18	18	18	23	200	735	1200	340	62	26
15	21	19	16	18	16	22	195	1150	1240	320	61	25
16	20	18	15	16	16	25	200	1300	1400	320	54	25
17	20	18	14	19	16	23	205	1280	1200	340	49	25
18	20	19	16	18	14	25	180	783	1000	300	46	29
19	19	20	15	17	15	35	175	710	950	280	45	29
20	18	17	14	18	16	40	190	806	1000	260	43	29
21	19	20	12	18	17	50	220	972	900	240	43	28
22	19	20	16	18	16	65	200	967	920	220	44	26
23	18	19	18	18	16	55	180	1090	930	200	45	25
24	18	18	17	17	20	50	200	1190	940	180	44	25
25	17	19	17	17	22	45	280	1200	1000	160	43	25
26	17	18	15	16	20	50	320	1160	900	150	42	25
27	17.	16	16	16	19	70	390	1180	820	140	41	25
28	16	19	17	14	18	93	350	1000	780	134	40	24
29	16	17	16	16	---	105	340	850	790	127	38	24
30	18	16	16	19	---	140	330	950	800	124	36	23
31	18	---	16	19	---	180	---	1000	---	116	36	---
TOTAL	644	548	499	527	485	1395	6373	21825	30680	9441	1996	817
MEAN	20.8	18.3	16.1	17.0	17.3	45.0	212	704	1023	305	64.4	27.2
MAX	45	23	19	19	22	180	390	1300	1400	700	111	34
MIN	15	16	12	13	14	19	115	158	780	116	36	23
AC-FT	1280	1090	990	1050	962	2770	12640	43290	60850	18730	3960	1620

WTR YR 1978 TOTAL 75230 MEAN 206 MAX 1400 MIN 12 AC-FT 149200

NOTE.--NO GAGE-HEIGHT RECORD OCT. 1 TO NOV. 10, MAR. 16 TO MAY 5, MAY 26-31, JUNE 3-7, JUNE 9 TO JULY 28, AUG. 2-4, SEPT. 7-15.

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO--Continued

PERIOD OF RECORD.--October 1977 to September 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
DEC 16...	1115	15	380	7.3	10.6	41	<1	K6	79	26
FEB 15...	1330	16	140	8.3	10.6	16	K1	K5	64	9
MAR 07...	1020	19	135	8.1	10.4	0	K3	K1	61	9
APR 04...	1200	123	120	8.9	9.8	8	K2	K5	46	5
MAY 08...	1320	182	110	8.1	10.0	12	K1	K4	40	2
JUN 06...	1130	862	80	7.0	12.7	9	K4	K3	33	5
JUL 11...	1330	300	70	8.3	10.5	4	K2	K22	27	5
AUG 14...	1400	64	110	8.2	--	14	K6	31	54	9

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC 16...	26	3.5	4.6	.2	.5	67	0	55	19	1.9
FEB 15...	21	2.9	4.3	.2	.5	68	0	56	16	1.5
MAR 07...	20	2.7	3.9	.2	.5	64	0	53	16	1.3
APR 04...	15	2.0	3.0	.2	.6	50	0	41	9.4	1.1
MAY 08...	13	1.9	2.8	.2	.4	47	0	39	9.1	.7
JUN 06...	11	1.4	1.9	.1	.5	34	0	28	11	.5
JUL 11...	8.9	1.0	1.7	.1	.3	26	0	21	6.8	.4
AUG 14...	18	2.2	2.8	.2	.5	55	0	45	15	.6

K BASED ON NON-IDEAL COLONY COUNT.

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
DEC 16...	.1	6.6	78	95	.11	3.18	.14	.09	.05
FEB 15...	.1	7.0	84	87	.11	3.63	.09	.01	.00
MAR 07...	.2	6.6	71	83	.10	3.64	.06	.00	.05
APR 04...	.1	7.5	63	64	.09	20.9	.13	.01	.47
MAY 08...	.1	8.0	58	59	.08	28.5	.01	.01	.44
JUN 06...	.1	7.0	50	50	.07	116	.05	.03	.22
JUL 11...	.1	5.5	34	38	.05	27.5	.01	.00	.24
AUG 14...	.1	6.4	71	73	.10	12.3	.03	.03	.13

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
DEC 16...	.14	.28	.00	.01	9	50	2.9	.4	40
FEB 15...	.00	.09	.01	.01	9	10	6.7	.2	150
MAR 07...	.05	.11	.03	.01	9	10	5.1	.2	120
APR 04...	.48	.61	.03	.01	20	50	4.4	.6	220
MAY 08...	.45	.46	.01	.00	20	30	4.2	.4	100
JUN 06...	.25	.30	.02	.00	30	50	3.5	.3	0
JUL 11...	.24	.25	.01	.00	8	50	2.3	.2	--
AUG 14...	.16	.19	.01	.01	30	10	1.2	.2	--

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BERYLLIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
APR 04...	1200	40	1	3	100	600	10	1	0	1	0
JUL 11...	1330	50	1	--	200	--	0	--	1	--	10

DATE	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY DISSOLVED (UG/L AS HG)
APR 04...	20	0	3	1	3	0	20	0	0	1500	.0
JUL 11...	--	1	--	2	--	0	--	4	0	--	.0

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	NICKEL, DIS-SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)
APR										
04...	.0	1	0	2	0	0	0	.0	10	170
JUL										
11...	--	2	--	0	--	0	--	.0	0	--

DATE	TEMPER-ATURE (DEG C)	DATE	TEMPER-ATURE (DEG C)
OCT		JUN	
26...	5.0	15...	12.0
DEC		JUL	
16...	.5	11...	12.0
FEB		11...	12.0
15...	2.0	14...	14.0
MAR		AUG	
07...	2.5	02...	13.0
APR		03...	13.0
04...	9.0	04...	13.0
MAY		14...	13.0
08...	4.0	14...	13.0
24...	9.0	28...	14.0
JUN		SEP	
06...	7.0	26...	12.0
06...	7.0		

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
16...	1100	15	3	.12
FEB				
15...	1300	15	10	.40
MAR				
07...	1005	18	4	.19
APR				
04...	1215	123	18	6.0
MAY				
08...	1300	182	10	4.9
JUN				
06...	1100	862	76	177
JUL				
11...	1330	300	11	8.9
AUG				
14...	1300	64	8	1.4

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	OCT 26,77	DEC 16,77	FEB 15,78	MAR 7,78
TIME	1145	1115	1330	1020
TOTAL CELLS/ML	810	60	150	120
DIVERSITY: DIVISION	1.1	0.0	0.0	0.4
.CLASS	1.1	0.0	0.0	0.4
..ORDER	1.9	0.0	0.0	0.4
...FAMILY	2.6	1.6	2.4	2.0
....GENUS	2.7	1.6	2.5	2.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	*	0	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	--	-	--	-	--	-
..VOLVOCALES								
...PHACOTACEAE								
....PTEROMONAS	--	-	--	-	--	-	8	7
...POLYBLEPHARIDACEAE								
....DUNALIELLA	17	2	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	10	1	--	-	--	-	--	-
....MELOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	130#	16	17#	43	35#	24	39#	33
....COCCONEIS	13	2	--	-	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	7	1	--	-	--	-	--	-
....CYMBELLA	23	3	--	-	9	6	--	-
...DIATOMACEAE								
....DIATOMA	10	1	11#	29	--	-	8	7
...EUNOTIACEAE								
....EUNOTIA	13	2	--	-	--	-	--	-
...FRAGILARIACEAE								
....HANNAEA	--	-	--	-	18	12	31#	27
....SYNEDRA	40	5	--	-	9	6	8	7
...GOMPHONEMATACEAE								
....GOMPHONEMA	*	0	--	-	44#	29	23#	20
...NAVICULACEAE								
....CALONEIS	--	-	--	-	--	-	--	-
....NAVICULA	7	1	--	-	26#	18	--	-
...NITZSCHIACEAE								
....NITZSCHIA	17	2	11#	29	9	6	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHAMAESIPHONALES								
...CHAMAESIPHONACEAE								
....ENTOPHYSALIS	10	1	--	-	--	-	--	-
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	190#	23	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	310#	39	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....PHACUS	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09132050 ANTHRACITE CREEK NEAR SOMERSET, CO--Continued

PHYTOPLANKTON DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	APR 4,78	MAY 8,78	JUN 6,78
TIME	1200	1320	1130
TOTAL CELLS/ML	220	100	0
DIVERSITY: DIVISION	0.5	0.0	0.0
.CLASS	0.5	0.0	0.0
..ORDER	1.4	0.0	0.0
...FAMILY	2.5	2.1	0.0
....GENUS	2.9	2.5	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
..VOLVOCALES						
...PHACOTACEAE						
....PTEROMONAS	--	-	--	-	--	-
...POLYBLEPHARIDACEAE						
....DUNALIELLA	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	--	-	--	-
....MELOSIRA	81#	38	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	14	14	--	-
....COCCONEIS	14	6	--	-	--	-
...CYMBELLACEAE						
....AMPHORA	--	-	--	-	--	-
....CYMBELLA	14	6	14	14	--	-
...DIATOMACEAE						
....DIATOMA	--	-	14	14	--	-
...EUNOTIACEAE						
....EUNOTIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....HANNAEA	14	6	14	14	--	-
....SYNEDRA	14	6	29#	29	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	14	6	--	-	--	-
...NAVICULACEAE						
....CALONEIS	14	6	--	-	--	-
....NAVICULA	27	13	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	--	-	14	14	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHAMAESIPHONALES						
...CHAMAESIPHONACEAE						
....ENTOPHYSALIS	--	-	--	-	--	-
..CHROCCOCCALES						
...CHROCCOCCACEAE						
....ANACYSTIS	--	-	--	-	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....PHACUS	14	6	--	-	--	-
....TRACHELOMONAS	14	6	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO

LOCATION.--Lat 38°55'45", long 107°26'53", in SW¼SE¼ sec.9, T.13 S., R.90 W., Gunnison County, Hydrologic Unit 14020004, on right bank 1.5 mi (2.4 km) east of Somerset and 4.5 mi (7.2 km) upstream from Hubbard Creek.

DRAINAGE AREA.--531 mi² (1,375 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-77-2.

GAGE.--Water-stage recorder. Datum of gage is 6,038.91 ft (1,840.660 m) National Geodetic Vertical Datum of 1929. Prior to July 22, 1971, at site 100 ft (30 m) downstream at datum 0.31 ft (0.094 m) lower.

REMARKS.--Records fair except those for winter period and those for period of no gage-height record, which are poor. Natural flow of stream affected by small diversions for irrigation in nearby drainage areas, irrigation of about 3,000 acres (12.1 km²) above station, storage in Overland Reservoir, capacity, 6,280 acre-ft (7.74 hm³), and storage in Paonia Reservoir, capacity, 18,300 acre-ft (22.6 hm³) since February 1961. See table below for contents of Paonia Reservoir.

COOPERATION.--Monthend contents, in acre-feet, in Paonia Reservoir; furnished by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--45 years, 428 ft³/s (12.12 m³/s), 310,100 acre-ft/yr (382 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,860 ft³/s (223 m³/s) June 4, 1957, gage height, 5.83 ft (1.777 m), present datum; minimum daily, 17 ft³/s (0.48 m³/s) Nov. 10, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,540 ft³/s (100 m³/s) at 0900 May 17, gage height, 4.93 ft (1.503 m); minimum daily, 21 ft³/s (0.59 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	39	32	29	33	35	531	860	1980	1000	252	205
2	42	36	32	26	29	40	405	800	2080	1000	231	199
3	41	43	33	30	31	43	531	820	2030	980	255	196
4	41	41	32	34	35	44	635	920	1870	900	292	193
5	41	41	30	35	34	41	655	1040	1780	800	284	193
6	58	40	28	35	35	38	612	990	1700	740	273	184
7	171	48	31	33	36	34	694	940	1950	690	269	181
8	116	46	32	30	34	32	825	900	1990	680	266	193
9	87	31	32	34	35	36	869	840	2120	700	266	184
10	77	33	38	34	34	42	745	910	2560	740	284	181
11	67	53	36	34	34	49	696	1020	2670	780	284	184
12	56	50	38	33	33	46	640	1130	2280	830	276	178
13	56	46	34	33	32	45	720	1340	2290	632	284	178
14	54	44	38	31	30	41	660	1670	2710	601	273	175
15	52	40	37	35	29	41	640	2210	2700	589	280	173
16	48	34	34	34	28	47	700	2630	2770	601	245	173
17	46	36	30	34	23	50	740	3090	2450	729	234	175
18	45	39	34	34	21	52	680	2630	2150	607	231	180
19	43	40	34	31	24	60	700	2430	1250	513	225	190
20	43	35	32	34	28	73	840	2150	1450	475	228	190
21	43	39	26	34	27	98	1000	2500	1600	443	228	170
22	43	38	30	33	27	90	800	2600	1300	403	228	160
23	41	39	33	31	27	83	900	2500	1100	349	228	140
24	41	38	35	31	29	78	1100	2800	1200	323	215	130
25	40	37	34	31	30	103	1200	2950	1400	307	202	130
26	39	37	31	33	31	109	1300	2600	1300	288	215	130
27	39	36	31	33	31	146	1200	2700	1200	269	218	120
28	38	42	36	29	32	191	1100	2300	1200	259	215	120
29	37	40	35	33	---	221	1000	1900	1200	255	211	118
30	38	40	34	34	---	296	920	2300	1100	255	205	115
31	40	---	34	32	---	408	---	2500	---	238	205	---
TOTAL	1666	1201	1026	1007	852	2712	24038	56970	55380	17976	7602	5038
MEAN	53.7	40.0	33.1	32.5	30.4	87.5	801	1838	1846	580	245	168
MAX	171	53	38	35	36	408	1300	3090	2770	1000	292	205
MIN	37	31	26	26	21	32	405	800	1100	238	202	115
AC-FT	3300	2380	2040	2000	1690	5380	47680	113000	109800	35660	15080	9990
a	1220	2200	2990	3920	4880	8630	8530	12760	18210	18180	8720	1270

CAL YR 1977 TOTAL 39370 MEAN 108 MAX 484 MIN 25 AC-FT 78090
WTR YR 1978 TOTAL 175468 MEAN 481 MAX 3090 MIN 21 AC-FT 348000

a MONTHEND CONTENTS, IN ACRE-FEET, IN PAONIA RESERVOIR, FURNISHED BY U.S. BUREAU OF RECLAMATION.
NOTE.--NO GAGE-HEIGHT RECORD FEB. 13 TO MAR. 24.

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO--Continued

PERIOD OF RECORD.--October 1977 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 20...	1000	38	150	7.6	4.5	9.4	61	2	19	3.4	7.3
DEC 16...	1245	57	146	7.6	.0	11.2	62	0	19	3.5	7.5
FEB 22...	1400	21	160	7.9	.0	--	64	0	20	3.5	8.1
MAR 07...	1300	30	175	8.2	.5	11.3	64	0	20	3.5	11
APR 06...	1100	588	200	8.5	6.0	--	84	0	26	4.6	9.6
MAY 10...	1100	917	170	--	7.0	--	69	0	21	4.1	6.3
JUN 06...	1530	1580	70	7.5	11.0	8.6	39	5	12	2.1	3.0
JUL 13...	1100	684	70	8.2	13.0	7.4	32	2	10	1.8	2.9
AUG 16...	1030	242	130	8.4	10.0	9.2	59	0	19	2.9	4.9

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 20...	.4	.6	73	0	60	13	2.0	.1	9.1	91
DEC 16...	.4	.5	75	0	62	14	2.3	.1	8.3	92
FEB 22...	.4	.6	79	0	65	12	2.3	.1	9.3	95
MAR 07...	.6	.6	83	0	68	15	3.3	.1	7.9	102
APR 06...	.5	1.4	110	0	90	13	2.5	.1	9.2	121
MAY 10...	.3	1.0	86	1	72	14	1.6	.1	9.2	101
JUN 06...	.2	.5	41	0	34	9.5	.6	.1	8.7	57
JUL 13...	.2	.4	37	0	30	9.1	.5	.1	7.8	51
AUG 16...	.3	.8	73	0	60	15	1.1	.1	8.9	89

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT 20...	.01	.28	.00	.05	.06	.02	20	70	1.0	1.2
DEC 16...	.03	.09	.00	.09	.12	.00	10	50	--	2.6
FEB 22...	.05	.01	.05	.06	.11	.01	20	70	1.2	1.2
MAR 07...	.06	.00	.13	.13	.19	.05	10	10	2.5	2.0
APR 06...	.19	.01	.27	.28	.47	.06	30	40	3.7	3.1
MAY 10...	.05	.04	.43	.47	.52	.05	30	30	4.2	4.4
JUN 06...	.08	.01	.50	.51	.59	.04	20	40	--	3.6
JUL 13...	.05	.03	.33	.36	.41	.01	20	30	2.5	2.3
AUG 16...	.02	.02	.25	.27	.29	.02	30	30	2.9	3.2

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT									
20...	1000	0	10	1	1	0	0	<10	0
APR									
06...	1100	890	40	1	1	0	10	1	1
JUL									
13...	1100	160	50	1	1	10	0	0	1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT									
20...	0	10	<10	1	100	0	0	10	.1
APR									
06...	0	0	1	1	0	0	30	0	.0
JUL									
13...	10	10	2	2	3	2	10	0	.0

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT								
20...	.0	<50	0	0	0	.4	0	0
APR								
06...	.0	2	3	0	0	1.0	0	0
JUL								
13...	.0	4	0	0	0	.0	0	0

09134050 MINNESOTA CREEK AT PAONIA, CO

LOCATION.--Lat 38°52'27", long 107°35'18", in SW¼SW¼ sec.32, T.13 S., R.91 W., Delta County, Hydrologic unit 14020004, on left bank at downstream side of bridge 0.1 mi (0.2 km) north of Paonia city limits and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--53.5 mi² (138.6 km²)

PERIOD OF RECORD.--May 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,660 ft (1,725 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are poor. Natural flow of stream affected by irrigation and return flow from areas above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 453 ft³/s (12.8 m³/s), Apr. 1, 1978, gage height, 5.00 ft (1.524 m), from floodmarks; minimum daily, 0.24 ft³/s (0.007 m³/s) Sept. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 453 ft³/s (12.8 m³/s), Apr. 1, gage height, 5.00 ft (1.524 m), from floodmarks; minimum daily, 0.50 ft³/s (0.014 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	1.0	2.0	1.5	2.0	3.5	83	5.8	76	54	3.6	2.3
2	.80	1.1	2.5	1.3	2.1	6.9	32	3.6	92	47	3.2	2.4
3	.90	6.6	2.7	1.4	2.2	7.9	25	3.5	91	41	2.9	2.5
4	1.1	10	2.5	1.6	2.3	6.3	18	7.1	117	35	2.6	2.6
5	1.2	9.7	2.0	2.1	3.0	7.0	13	3.9	110	30	2.6	2.6
6	1.8	9.7	1.3	2.2	2.2	7.0	9.0	9.2	108	25	2.8	2.5
7	22	9.3	2.4	2.2	2.3	4.4	7.3	13	111	20	2.7	2.6
8	7.2	11	2.1	2.0	2.0	4.2	5.1	9.6	102	7.3	2.6	2.7
9	5.2	9.1	2.3	2.1	1.4	4.5	3.8	6.5	94	6.6	2.8	2.8
10	4.7	2.9	2.4	2.3	2.7	4.5	6.4	19	102	7.2	2.6	3.1
11	4.5	2.4	2.0	2.5	2.3	4.0	8.7	17	121	7.6	2.2	3.6
12	4.2	2.6	2.1	2.5	1.2	4.4	12	11	109	4.6	2.2	3.1
13	4.4	2.2	1.9	2.3	2.1	4.0	20	13	86	3.2	2.3	3.1
14	4.3	2.2	2.0	2.7	1.7	3.3	19	19	64	3.5	2.5	3.0
15	4.1	3.1	2.3	2.5	2.0	3.1	20	30	95	3.4	2.5	3.0
16	4.7	6.5	2.5	2.3	2.0	3.2	19	47	137	7.8	2.3	2.9
17	5.7	2.4	1.5	2.5	2.0	3.5	19	63	119	16	2.4	3.1
18	5.0	2.5	1.6	2.6	1.9	4.2	16	53	96	16	2.4	3.1
19	4.6	2.7	1.6	2.1	1.7	5.2	17	51	77	3.4	2.2	3.2
20	4.5	2.0	1.5	2.0	1.8	11	17	61	69	3.4	2.3	3.2
21	4.1	2.1	1.3	2.0	2.2	12	19	71	46	3.7	2.4	3.0
22	4.0	2.3	1.3	2.1	2.4	21	17	76	29	3.3	2.5	2.7
23	4.0	2.4	1.5	2.3	2.3	16	16	83	49	3.2	2.7	2.5
24	4.0	2.4	1.6	2.3	2.4	21	17	95	43	3.3	3.0	2.5
25	3.9	2.9	1.5	1.5	2.3	19	19	100	34	3.3	2.8	2.5
26	3.8	2.8	1.4	1.7	2.5	19	22	94	28	3.3	2.9	2.5
27	3.7	2.5	1.4	1.8	3.0	21	27	88	23	3.4	2.8	2.4
28	3.6	3.2	1.5	2.0	2.7	24	26	83	27	3.6	2.5	2.2
29	3.9	2.2	1.5	2.0	---	24	20	76	54	3.4	2.5	2.3
30	9.3	2.1	1.6	2.1	---	24	13	70	67	3.0	2.3	2.2
31	13	---	1.6	2.1	---	35	---	72	---	4.3	2.3	---
TOTAL	148.70	123.9	57.4	64.6	60.7	338.1	566.3	1354.2	2376	379.8	80.4	82.2
MEAN	4.80	4.13	1.85	2.08	2.17	10.9	18.9	43.7	79.2	12.3	2.59	2.74
MAX	22	11	2.7	2.7	3.0	35	83	100	137	54	3.6	3.6
MIN	.50	1.0	1.3	1.3	1.2	3.1	3.8	3.5	23	3.0	2.2	2.2
AC-FT	295	246	114	128	120	671	1120	2690	4710	753	159	163

CAL YR 1977 TOTAL 943.84 MEAN 2.59 MAX 39 MIN .24 AC-FT 1870
WTR YR 1978 TOTAL 5632.30 MEAN 15.4 MAX 137 MIN .50 AC-FT 11170

09134200 COTTONWOOD CREEK NEAR HOTCHKISS, CO

LOCATION.--Lat 38°48'22", long 107°41'12", in NW¼SW¼ sec.28, T.14 S., R.92 W., Delta County, Hydrologic unit 14020004, on right bank at upstream side of bridge, 0.8 mi (1.3 km) upstream from mouth, and 1.7 mi (2.7 km) east of Hotchkiss.

DRAINAGE AREA.--41.0 mi^2 (106.2 km^2).

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,385 ft (1,641 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record and ice effect, which are poor. Natural flow of stream affected by diversions for irrigation and return flow from irrigation of about 1,200 acres (6.0 km^2) above station. After early snowmelt in Juniper, Pinon, and Sage area, most flow would be return flow from irrigation above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 946 ft^3/s (26.8 m^3/s) July 20, 1977, gage height, 8.33 ft (2.539 m), from floodmarks, from rating curve extended above 21 ft^3/s (0.6 m^3/s), on basis of slope-area measurement of peak flow; minimum daily, 0.48 ft^3/s (0.014 m^3/s) July 1, 2, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 840 ft^3/s (23.8 m^3/s) at 0730 Oct. 7, gage height, 7.24 ft (2.207 m), from floodmarks, from rating curve extended above 21 ft^3/s (0.6 m^3/s), on basis of slope-area measurement of peak flow; minimum daily, 0.93 ft^3/s (0.026 m^3/s) Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	1.4	1.2	1.8	2.8	8.9	6.8	12	7.4	4.0	3.7
2	1.2	1.2	1.4	1.1	1.8	3.2	6.0	6.6	12	7.3	4.2	3.8
3	1.2	1.2	1.4	1.1	1.8	4.2	4.2	5.4	13	6.2	4.1	3.9
4	1.2	1.2	1.4	1.1	1.8	3.7	3.3	5.6	10	5.6	4.1	4.0
5	1.2	1.2	1.4	1.1	1.8	3.4	2.8	8.8	14	5.5	4.4	3.7
6	1.8	1.2	1.4	1.1	1.8	3.1	2.7	13	15	5.2	4.4	3.7
7	125	1.2	1.4	1.1	1.7	2.9	2.5	17	15	5.2	4.7	3.7
8	3.1	1.2	1.4	1.1	1.6	2.4	2.4	14	13	6.6	4.9	4.6
9	2.3	1.2	1.2	1.1	1.4	2.3	2.7	11	12	9.0	4.9	4.6
10	2.0	1.2	1.2	1.1	1.7	2.3	3.2	9.5	13	9.9	5.0	4.9
11	1.9	1.2	1.2	1.1	1.4	2.3	3.3	6.8	14	10	5.1	5.0
12	1.8	1.2	1.2	1.0	1.2	2.3	3.3	6.9	14	11	4.9	4.8
13	1.5	.95	1.2	1.0	1.4	2.3	3.3	8.9	15	10	5.1	4.8
14	1.5	.95	1.2	.95	1.5	2.3	3.0	11	14	10	5.2	4.8
15	1.5	.95	1.2	1.2	1.6	2.3	3.0	11	14	8.6	5.2	4.6
16	1.5	.95	1.2	1.7	1.7	2.2	3.7	8.6	13	7.4	5.1	4.5
17	1.5	.95	1.1	1.7	1.7	2.1	4.7	11	12	9.7	4.2	4.5
18	1.5	1.0	1.1	1.8	1.7	2.1	6.0	10	10	8.6	3.7	4.7
19	1.4	1.1	1.1	1.8	1.6	2.1	6.4	8.5	11	7.5	3.8	4.6
20	1.3	1.1	1.1	1.8	1.7	2.1	5.1	8.2	11	6.9	3.7	4.7
21	1.3	1.1	1.1	1.8	1.8	2.7	4.5	9.9	12	6.0	4.0	4.1
22	1.3	1.2	1.1	1.7	1.9	4.6	5.0	17	9.3	5.8	4.0	4.0
23	1.3	1.2	1.1	1.6	2.0	5.0	5.6	12	10	5.4	4.0	4.0
24	1.3	1.2	1.1	1.5	2.0	3.8	5.9	15	9.7	5.5	4.0	4.0
25	1.3	1.2	1.1	1.5	2.0	4.1	5.4	13	8.9	4.9	4.0	4.0
26	1.3	1.2	.93	1.5	2.1	3.4	3.9	15	8.9	4.5	3.7	3.9
27	1.2	1.2	1.0	1.6	2.3	3.3	4.2	11	8.0	4.6	4.0	3.7
28	1.2	1.3	1.1	1.7	2.5	3.0	4.8	13	8.0	5.0	3.9	3.6
29	1.2	1.4	1.1	1.7	---	2.9	6.2	13	8.7	4.7	3.4	3.7
30	1.2	1.4	1.2	1.8	---	2.7	7.9	11	11	4.5	3.4	3.5
31	1.2	---	1.2	1.8	---	2.6	---	11	---	4.1	3.5	---
TOTAL	169.4	34.75	37.23	43.35	49.3	90.5	133.9	329.5	351.5	212.6	132.6	126.1
MEAN	5.46	1.16	1.20	1.40	1.76	2.92	4.46	10.6	11.7	6.86	4.28	4.20
MAX	125	1.4	1.4	1.8	2.5	5.0	8.9	17	15	11	5.2	5.0
MIN	1.2	.95	.93	.95	1.2	2.1	2.4	5.4	8.0	4.1	3.4	3.5
AC-FT	336	69	74	86	98	180	266	654	697	422	263	250

CAL YR 1977 TOTAL 953.13 MEAN 2.61 MAX 125 MIN .48 AC-FT 1690
WTR YR 1978 TOTAL 1710.73 MEAN 4.69 MAX 125 MIN .93 AC-FT 3390

NOTE.--NO GAGE-HEIGHT RECORD JAN. 25 TO MAR. 7.

09135900 LEROUX CREEK AT HOTCHKISS, CO

LOCATION.--Lat 38°47'53", long 107°43'53", in NW¼NE¼ sec.36, T.14 S., R.93 W., Delta County, Hydrologic Unit 14020004, on left bank at upstream side of culvert, 0.3 mi (0.5 km) west of Hotchkiss city limits, and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--66.7 mi^2 (172.8 km^2).

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,315 ft (1,620 m), from topographic map.

REMARKS.--Records good. Natural flow of stream is affected by diversions above station for irrigation and by return flow from irrigated area above station. Mostly return flow after June. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 689 ft^3/s (19.5 m^3/s) June 10, 1978; maximum gage height, 7.72 ft (2.353 m) June 10, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 689 ft^3/s (19.5 m^3/s) at 2300 June 10; gage height, 7.72 ft (2.353 m); minimum daily, 1.4 ft^3/s (0.040 m^3/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.4	3.4	2.7	2.5	2.8	30	3.8	305	7.5	3.1	2.8
2	1.4	2.5	3.6	2.7	2.5	3.0	26	6.0	315	6.9	4.2	2.8
3	1.5	2.7	3.6	2.7	2.5	3.0	16	15	183	6.9	4.1	2.8
4	1.6	2.7	3.6	2.7	2.5	3.0	8.9	30	153	6.9	4.0	3.0
5	1.6	2.8	3.8	2.7	2.5	3.0	11	3.3	107	6.5	4.0	3.3
6	1.7	2.8	4.0	2.7	2.5	3.3	8.0	1.9	101	6.0	3.6	2.7
7	1.7	2.8	4.0	2.7	2.6	3.6	14	1.8	162	5.9	3.8	3.1
8	1.7	2.8	4.0	2.7	2.7	3.6	28	1.8	190	5.9	3.8	3.5
9	1.7	2.8	3.8	2.7	2.7	3.4	33	1.8	254	5.9	3.8	3.4
10	1.7	2.7	3.8	2.7	2.7	3.4	14	1.8	400	5.9	3.8	4.1
11	1.8	2.7	3.8	2.5	2.8	3.4	7.1	13	451	6.0	3.8	5.4
12	1.9	2.7	3.8	2.5	2.7	3.4	25	33	402	6.0	3.9	6.0
13	2.3	2.7	3.8	2.5	2.3	3.4	29	71	357	5.2	3.7	5.1
14	2.2	2.8	3.6	2.5	3.2	3.4	9.7	152	330	3.6	3.6	5.0
15	2.1	2.8	3.6	2.8	3.2	3.4	12	273	321	2.5	3.6	5.1
16	2.0	2.8	3.6	3.0	3.2	3.4	9.3	288	275	2.5	3.1	4.9
17	2.0	2.8	3.5	3.0	3.2	3.4	11	263	177	2.5	2.6	4.5
18	2.1	2.8	3.4	3.0	3.0	3.4	2.8	70	117	2.5	2.7	5.4
19	2.2	2.8	3.4	3.0	3.0	3.4	2.4	80	92	2.9	2.9	7.4
20	2.2	2.8	3.3	3.0	3.0	3.4	4.6	130	74	2.5	3.0	7.7
21	2.1	2.8	2.9	3.0	3.0	3.3	27	133	48	2.0	3.0	8.0
22	1.9	2.7	2.8	3.0	3.0	3.9	3.2	180	35	2.0	3.0	8.3
23	2.0	2.8	2.8	3.0	3.0	4.0	1.5	264	33	2.0	3.3	8.6
24	2.0	2.8	2.8	3.0	2.8	3.8	5.1	314	24	2.0	3.4	8.7
25	2.0	3.0	2.8	2.8	2.8	4.0	54	252	20	1.9	4.1	8.7
26	2.1	3.2	2.8	2.8	2.8	3.8	100	159	11	1.9	3.6	9.0
27	2.3	3.2	2.8	2.8	2.8	3.8	97	204	7.7	1.9	3.4	9.3
28	2.3	3.4	2.7	2.7	2.8	3.8	26	84	5.6	1.9	3.4	9.0
29	2.3	3.4	2.7	2.7	---	3.8	15	114	6.2	1.9	3.3	8.6
30	2.4	3.4	2.7	2.7	---	3.8	12	243	11	1.9	2.8	8.0
31	2.4	---	2.7	2.5	---	3.8	---	303	---	1.9	2.8	---
TOTAL	60.6	85.4	103.9	85.8	78.3	107.9	642.6	3700.2	4967.5	121.8	107.2	174.2
MEAN	1.95	2.85	3.35	2.77	2.80	3.48	21.4	119	166	3.93	3.46	5.81
MAX	2.4	3.4	4.0	3.0	3.2	4.0	100	314	451	7.5	4.2	9.3
MIN	1.4	2.4	2.7	2.5	2.3	2.8	1.5	1.8	5.6	1.9	2.6	2.7
AC-FT	120	169	206	170	155	214	1270	7340	9850	242	213	346

CAL YR 1977 TOTAL 1188.40 MEAN 3.26 MAX 10 MIN .55 AC-FT 2360
WTR YR 1978 TOTAL 10235.40 MEAN 28.0 MAX 451 MIN 1.4 AC-FT 20300

09136200 GUNNISON RIVER NEAR LAZEAR, CO

LOCATION.--Lat 38°46'59", long 107°50'14", in NE¼NE¼ sec.1, T.15 S., R.94 W., Delta County, Hydrologic Unit 14020004, on left bank 300 ft (91 m) downstream from North Fork Gunnison River and 3.0 mi (4.8 km) west of Lazear.

DRAINAGE AREA.--5,241 mi² (13,574 km²).

PERIOD OF RECORD.--May 1962 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,090 ft (1,551 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power development, and diversions for irrigation of about 150,000 acres (607 km²), part of which is in the Uncompahgre River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) May 13, 1962, gage height, 5.30 ft (1.920 m), from recorded range in stage; minimum daily, 115 ft³/s (3.26 m³/s) Oct. 6, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,650 ft³/s (189 m³/s) at 0600 June 16, gage height, 4.83 ft (1.472 m); minimum daily, 251 ft³/s (7.11 m³/s) Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	363	414	388	585	576	1200	1640	2880	3610	295	513
2	277	350	410	381	570	609	1100	1600	3430	3520	319	587
3	273	341	434	400	570	602	900	1750	3520	3340	321	459
4	272	345	434	391	566	602	960	1790	3280	3000	326	552
5	254	345	428	400	573	602	960	1520	2990	2760	330	627
6	274	348	414	403	580	602	980	1420	2690	1830	321	637
7	435	359	406	292	599	600	1100	1440	2960	1510	318	557
8	350	402	433	251	602	598	1200	1340	3080	1050	311	590
9	315	391	409	276	584	566	1400	1240	3150	1010	323	498
10	295	384	403	478	603	573	1200	1350	3980	1020	699	645
11	295	388	418	502	611	573	1160	1540	4440	947	728	630
12	292	412	416	495	598	576	1390	1720	4290	911	586	617
13	290	411	400	495	588	587	1540	2030	5370	900	593	586
14	310	402	397	495	583	568	1390	2640	5950	814	616	661
15	304	406	412	495	576	552	1520	3590	5990	715	584	754
16	294	400	421	495	582	540	1520	3990	6170	744	578	811
17	287	391	384	539	572	548	1510	5360	5910	863	573	712
18	280	394	382	578	578	553	1260	4500	4770	1190	556	748
19	282	406	375	568	570	570	1250	3830	4460	1830	549	787
20	280	404	380	573	568	573	1360	3530	4480	1850	552	839
21	281	390	417	578	546	561	1560	3550	4140	1810	616	872
22	283	421	463	579	562	538	1370	2920	4050	1790	538	891
23	288	423	402	577	570	487	1280	2420	4100	1790	584	969
24	285	419	411	580	568	483	1410	2240	3740	1550	605	943
25	287	420	408	568	570	452	1680	2320	4080	955	537	907
26	303	420	390	567	579	418	1940	2470	3910	858	562	994
27	300	418	389	581	590	446	2320	4510	3520	815	565	1030
28	300	432	397	559	583	508	1910	3740	3470	791	564	954
29	298	426	405	560	---	550	1820	3390	3630	783	499	778
30	306	423	407	563	---	612	1820	3400	4660	770	569	877
31	315	---	412	588	---	760	---	2960	---	703	497	---
TOTAL	9180	11834	12671	15195	16226	17385	42010	81740	123090	46029	15676	22025
MEAN	296	394	409	490	580	561	1400	2637	4103	1485	506	734
MAX	435	432	463	588	611	760	2320	5360	6170	3610	728	1030
MIN	254	341	375	251	546	418	900	1240	2690	703	295	459
AC-FT	18210	23470	25130	30140	32180	34480	83330	162100	244100	91300	31090	43690

CAL YR 1977 TOTAL 171250 MEAN 469 MAX 1510 MIN 215 AC-FT 339700
WTR YR 1978 TOTAL 413061 MEAN 1132 MAX 6170 MIN 251 AC-FT 819300

09137050 CURRANT CREEK NEAR READ, CO

LOCATION.--Lat 38°47'05", long 107°56'18", in SW¼SE¼ sec.31, T.14 S., R.94 W., Delta County, Hydrologic Unit 14020005, on right bank 0.2 mi (0.3 km) downstream from Dry Creek, 0.4 mi (0.6 km) upstream from mouth, 0.7 mi (1.1 km) northeast of Austin, and 2.4 mi (3.9 km) northeast of Read.

DRAINAGE AREA.--56.9 mi² (147.4 km²).

PERIOD OF RECORD.--May 1976 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,035 ft (1,535 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 179 ft³/s (5.07 m³/s) May 16, 1978, gage height, 4.43 ft (1.350 m), from float-tape indicator; minimum daily, 0.03 ft³/s (0.001 m³/s) May 30, 1977, Aug. 20, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 179 ft³/s (5.07 m³/s) at 0500 May 16, gage height, 4.43 ft (1.350 m), from float-tape indicator; minimum daily, 0.03 ft³/s (0.001 m³/s) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.99	.22	1.0	1.2	1.4	2.8	44	2.0	49	3.4	1.1	.95
2	.99	.18	1.1	1.3	1.3	3.6	11	2.6	59	2.2	.38	.95
3	.89	.21	1.0	1.2	1.3	3.8	3.9	3.3	47	1.4	.14	.95
4	.80	.19	1.0	1.3	1.3	3.3	2.6	3.7	37	1.2	.08	.95
5	.77	.19	1.1	1.3	1.3	3.3	2.4	4.6	7.1	1.0	.07	.95
6	1.7	.19	1.0	1.3	1.4	3.4	2.2	3.8	11	.64	.08	.95
7	5.8	.19	1.1	1.3	1.6	3.1	2.2	3.3	25	.56	.06	.95
8	1.8	.18	1.1	1.3	1.6	2.9	8.3	3.1	33	.09	.35	.95
9	.99	.15	1.1	1.3	1.4	2.8	6.7	2.0	33	.07	.50	.95
10	.77	.15	1.1	1.3	1.6	2.8	3.8	3.7	37	.06	.11	.95
11	.73	.15	1.1	1.3	1.6	1.3	3.3	3.1	36	.08	.20	.95
12	.77	.16	1.2	1.3	1.4	1.3	5.5	4.4	32	.18	.96	.95
13	.84	.16	1.1	1.3	1.3	1.3	7.7	8.6	27	.23	.31	.95
14	.84	.18	1.2	1.3	1.3	1.2	2.9	28	28	.15	.13	.95
15	.94	.18	1.2	1.6	1.3	1.1	2.6	72	24	.06	.07	.95
16	.89	.18	1.2	1.7	1.4	1.0	3.8	79	17	.06	.08	.95
17	.94	.18	1.1	1.5	1.3	1.0	2.6	59	16	.07	.05	.95
18	.89	.18	1.2	1.4	2.2	1.0	2.8	7.3	11	.09	.05	.95
19	.84	.35	1.1	1.3	2.6	1.0	4.3	6.5	7.7	.09	.04	.95
20	.80	1.0	1.1	1.4	2.6	1.0	3.7	17	2.8	.66	.03	.95
21	.77	1.0	.84	1.4	2.3	.56	3.7	7.6	2.6	.40	.09	.95
22	.77	1.1	.98	1.3	2.4	.47	4.6	13	1.8	.30	.66	.95
23	.77	1.0	1.3	1.4	2.5	.79	2.2	14	.92	.16	.45	.95
24	.80	.99	1.5	1.4	2.5	.96	1.4	21	.59	.30	.45	.95
25	.77	1.0	1.2	1.3	2.6	.73	2.4	18	.42	.18	.95	.95
26	.43	1.0	1.2	1.4	2.6	.98	3.1	5.7	.21	.07	.95	.95
27	.43	1.1	1.2	1.4	2.9	2.0	24	7.2	.14	.06	.95	.95
28	.43	1.2	1.2	1.3	2.9	2.0	4.4	8.9	.19	.05	.95	1.0
29	.48	.99	1.2	1.4	---	1.3	3.8	12	.45	.11	.95	1.0
30	.70	1.0	1.3	1.3	---	1.5	2.6	21	9.2	.30	.95	1.0
31	.55	---	1.3	1.4	---	2.9	---	33	---	.55	.95	---
TOTAL	30.88	14.95	35.32	41.9	51.9	57.19	178.5	478.4	556.12	14.77	13.09	28.65
MEAN	1.00	.50	1.14	1.35	1.85	1.84	5.95	15.4	18.5	.48	.42	.96
MAX	5.8	1.2	1.5	1.7	2.9	3.8	44	79	59	3.4	1.1	1.0
MIN	.43	.15	.84	1.2	1.3	.47	1.4	2.0	.14	.05	.03	.95
AC-FT	61	30	70	83	103	113	354	949	1100	29	26	57

CAL YR 1977 TOTAL 470.74 MEAN 1.29 MAX 5.8 MIN .03 AC-FT 934
WTR YR 1978 TOTAL 1501.67 MEAN 4.11 MAX 79 MIN .03 AC-FT 2980

NOTE.--NO GAGE-HEIGHT RECORD AUG. 25 TO SEPT. 30.

GUNNISON RIVER BASIN

09143000 SURFACE CREEK NEAR CEDAREDGE, CO

LOCATION.--Lat 38°59'05", long 107°51'13", in NW¼NW¼ sec.25, T.12 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank 5 ft (2 m) downstream from private bridge, 1.4 mi (2.3 km) downstream from Caesar Creek, and 7.0 mi (11.3 km) northeast of Cedaredge.

DRAINAGE AREA.--26.7 mi² (69.2 km²).

PERIOD OF RECORD.--July 1939 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,261 ft (2,518 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by many small reservoirs. Some water imported from Leon Lake in Plateau Creek drainage. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--39 years, 40.7 ft³/s (1.153 m³/s), 29,490 acre-ft/yr (36.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 624 ft³/s (17.7 m³/s) May 18, 1973, gage height, 3.21 ft (0.978 m), from rating curve extended above 310 ft³/s (8.8 m³/s); maximum gage height, 5.10 ft (1.554 m) Apr. 13, 1958 (ice jam); minimum daily discharge, 0.80 ft³/s (0.023 m³/s) Jan. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 366 ft³/s (10.4 m³/s) at 2330 June 13, gage height, 2.75 ft (0.838 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Dec. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	4.8	1.3	1.8	2.2	2.5	12	39	214	135	73	56
2	5.8	3.5	1.3	1.6	2.2	2.5	12	41	201	119	70	54
3	6.0	2.5	1.4	1.6	2.2	2.4	8.5	56	192	108	58	54
4	6.0	2.7	1.6	1.7	2.0	2.4	7.0	68	186	99	74	54
5	6.2	1.6	1.6	1.8	2.2	2.5	7.0	51	171	88	51	54
6	9.4	2.0	1.4	1.8	2.4	2.5	6.5	37	162	89	53	54
7	12	2.2	1.6	1.8	2.4	2.5	7.9	31	189	88	48	69
8	6.8	1.9	1.6	1.8	2.5	2.5	11	26	195	84	53	68
9	5.5	1.8	1.3	1.8	2.5	2.5	12	26	207	84	53	46
10	4.8	2.9	1.4	1.9	2.5	2.7	8.8	43	214	82	57	43
11	3.7	1.8	1.6	1.9	2.5	2.5	9.1	61	214	99	58	42
12	3.9	1.9	1.8	1.9	2.5	2.7	13	78	217	69	57	31
13	6.2	1.9	1.8	2.0	2.5	2.5	15	117	259	89	57	28
14	6.5	1.9	1.9	2.0	2.7	2.5	13	177	290	83	56	33
15	6.2	1.6	2.0	1.9	2.5	2.5	13	231	284	84	56	35
16	5.8	1.6	1.9	2.0	2.5	2.5	12	231	287	82	66	38
17	6.0	1.6	1.6	2.2	2.4	2.5	11	171	256	82	71	39
18	4.5	1.6	1.4	2.4	2.1	3.7	10	103	234	82	70	39
19	3.7	1.6	1.6	2.0	1.8	3.7	13	130	228	71	54	48
20	3.7	1.5	1.4	2.2	1.9	3.3	17	171	217	69	51	48
21	3.9	1.4	1.2	2.2	2.0	4.3	22	180	207	64	52	48
22	3.7	1.3	1.2	2.2	2.1	5.5	16	207	198	58	52	41
23	3.5	1.6	1.3	2.1	2.3	4.3	18	201	192	53	59	34
24	3.1	1.6	1.6	2.1	2.3	3.5	27	214	186	53	49	32
25	8.2	1.3	1.6	1.6	2.3	3.1	39	207	180	64	49	31
26	8.5	1.4	1.6	1.7	2.4	3.3	49	189	168	62	43	31
27	5.0	1.3	1.6	1.8	2.5	4.1	60	195	156	71	43	32
28	4.5	1.3	1.8	1.9	2.5	5.5	47	171	148	80	42	18
29	11	1.3	1.8	2.0	---	5.0	46	192	148	76	51	16
30	12	1.3	1.8	2.1	---	7.0	46	204	174	71	56	18
31	12	---	1.9	2.2	---	9.4	---	210	---	71	57	---
TOTAL	193.9	56.7	48.9	60.0	64.9	108.4	588.8	4058	6174	2529	1781	1234
MEAN	6.25	1.89	1.58	1.94	2.32	3.50	19.6	131	206	81.6	57.5	41.1
MAX	12	4.8	2.0	2.4	2.7	9.4	60	231	290	135	74	69
MIN	3.1	1.3	1.2	1.6	1.8	2.4	6.5	26	148	53	42	16
AC-FT	385	112	97	119	129	215	1170	8050	12250	5020	3530	2450

CAL YR 1977 TOTAL 3500.70 MEAN 9.59 MAX 40 MIN .80 AC-FT 6940
WTR YR 1978 TOTAL 16897.60 MEAN 46.3 MAX 290 MIN 1.2 AC-FT 33520

09143500 SURFACE CREEK AT CEDAREDGE, CO

LOCATION.--Lat 38°54'06", long 107°55'14", in SW¼SE¼ sec.20, T.13 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank at Cedaredge, 700 ft (210 m) east of State Highway 65, and 8.5 mi (13.7 km) upstream from mouth.

DRAINAGE AREA.--39.5 mi^2 (102.3 km^2).

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,220 ft (1,896 m), from topographic map. Prior to June 8, 1917, nonrecording gage at same site at datum 0.50 ft (0.152 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by diversions to and from nearby streams, many small storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--62 years, 26.7 ft^3/s (0.756 m^3/s), 19,340 acre-ft/yr (23.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft^3/s (33.7 m^3/s) May 13, 1941, gage height, 2.50 ft (0.762 m), from rating curve extended above 640 ft^3/s (16 m^3/s); no flow Sept. 25, 1939, and practically no flow at times in some winters.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278 ft^3/s (7.87 m^3/s) at 0400 June 14, gage height, 2.02 ft (0.616 m); minimum daily, 1.3 ft^3/s (0.037 m^3/s) Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	1.4	1.9	2.6	1.9	2.7	38	49	138	89	30	14
2	4.2	1.8	2.4	2.6	1.9	3.1	25	50	134	79	28	16
3	4.2	2.7	2.0	2.6	2.0	3.1	14	77	119	79	20	15
4	4.2	2.7	2.1	2.6	2.0	3.0	10	89	111	75	22	13
5	4.2	2.8	1.9	2.7	1.9	3.0	10	58	97	75	23	7.4
6	5.1	2.7	1.8	2.6	2.0	3.1	10	49	91	71	20	4.7
7	10	3.0	2.3	2.4	2.0	3.0	14	35	107	65	13	13
8	6.4	3.1	2.4	3.1	2.1	3.3	21	31	115	67	20	14
9	5.3	2.0	2.5	3.1	2.8	3.1	23	30	127	67	24	13
10	4.7	2.3	2.4	2.7	2.3	3.3	14	52	132	69	26	14
11	3.6	3.8	2.3	2.6	2.1	3.1	14	65	132	79	25	14
12	3.1	3.1	2.1	2.4	2.4	3.1	26	67	132	71	26	15
13	4.2	2.4	2.3	2.1	2.3	3.0	32	95	172	67	26	14
14	5.1	2.3	2.5	2.1	2.0	2.8	26	138	218	69	25	14
15	5.5	2.3	2.6	2.1	2.1	3.0	33	168	208	57	23	14
16	6.1	1.9	2.6	2.0	2.4	3.0	31	185	190	52	24	19
17	6.1	2.0	2.5	2.1	3.0	3.1	23	165	170	55	17	20
18	4.9	2.4	2.4	2.3	3.8	3.3	16	101	145	50	16	20
19	3.1	2.3	2.3	2.3	3.0	3.8	16	105	132	39	12	32
20	3.4	1.7	2.3	1.9	2.3	4.0	23	134	125	38	14	43
21	4.0	2.0	2.2	1.9	2.3	5.3	26	136	111	32	14	30
22	4.2	2.6	2.1	1.9	2.6	7.7	18	155	105	28	19	23
23	4.0	3.3	2.1	1.9	3.0	6.7	22	170	103	22	13	18
24	3.6	3.1	2.1	2.1	3.3	6.4	38	185	97	21	14	17
25	4.9	2.3	2.4	2.1	2.7	4.7	55	160	97	22	17	17
26	6.4	2.3	2.3	2.1	2.4	5.1	61	143	91	18	16	15
27	4.7	2.1	2.3	2.0	2.4	6.7	79	134	91	16	14	18
28	3.3	2.3	2.4	2.1	2.6	8.3	57	115	95	19	14	14
29	2.6	1.9	2.6	2.1	---	9.2	71	130	101	22	17	12
30	1.3	2.1	2.6	2.3	---	14	60	138	111	21	21	12
31	1.4	---	2.6	2.0	---	21	---	143	---	21	18	---
TOTAL	138.2	72.7	71.3	71.4	67.6	158.0	906	3352	3797	1555	611	505.1
MEAN	4.46	2.42	2.30	2.30	2.41	5.10	30.2	108	127	50.2	19.7	16.8
MAX	10	3.8	2.6	3.1	3.8	21	79	185	218	89	30	43
MIN	1.3	1.4	1.8	1.9	1.9	2.7	10	30	91	16	12	4.7
AC-FT	274	144	141	142	134	313	1800	6650	7530	3080	1210	1000

CAL YR 1977 TOTAL 2705.92 MEAN 7.41 MAX 44 MIN .80 AC-FT 5370
WTR YR 1978 TOTAL 11305.30 MEAN 31.0 MAX 218 MIN 1.3 AC-FT 22420

09144200 TONGUE CREEK AT CORY, CO

LOCATION.--Lat 38°47'16", long 107°59'41", in SW¼SW¼ sec.34, T.14 S., R.95 W., Delta County, Hydrologic Unit 14020005, on left bank at downstream side of bridge, 500 ft (150 m) upstream from North Delta canal headgate, 0.5 mi (0.8 km) west of Cory, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--196 mi² (508 km²).

PERIOD OF RECORD.--October 1957 to September 1968, May 1976 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,030 ft (1,533 m), from topographic map.

REMARKS.--Records good except those for ice effected periods, which are poor. Natural flow of stream affected by many small storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Diversions to and from nearby streams. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years (water years 1958-68, 1977-78), 26.6 ft³/s (0.753 m³/s), 19,270 acre-ft/yr (23.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 748 ft³/s (21.2 m³/s) June 7, 1958, gage height, 5.32 ft (1.622 m); minimum daily, 0.35 ft³/s (0.010 m³/s) July 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 732 ft³/s (20.7 m³/s) at 2400 May 15, gage height, 5.44 ft (1.658 m), from levels; minimum daily, 4.0 ft³/s (0.113 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	7.1	6.4	8.1	9.0	13	275	51	161	34	7.2	5.6
2	4.5	7.5	6.4	7.7	8.5	15	127	44	180	23	6.4	6.3
3	4.4	7.0	6.4	7.7	8.3	15	67	57	167	18	5.3	5.1
4	4.6	7.4	6.3	7.9	8.6	15	41	99	149	15	6.3	5.5
5	4.9	6.6	6.4	7.9	8.7	14	45	47	147	15	7.2	6.1
6	5.6	7.6	5.3	7.8	9.7	15	50	32	103	18	5.7	7.0
7	38	7.4	5.6	7.6	10	14	101	32	137	14	5.6	8.4
8	6.7	6.8	5.7	7.4	12	15	156	29	140	11	5.2	9.1
9	6.3	6.8	5.2	7.5	11	15	147	26	161	9.9	6.0	8.4
10	5.5	6.9	5.7	7.9	13	15	64	44	182	8.3	6.0	8.2
11	5.2	7.8	5.7	8.0	13	15	60	77	194	17	5.7	8.7
12	5.0	7.9	6.1	8.0	12	16	127	74	183	13	5.1	8.6
13	5.8	7.4	5.9	7.7	11	16	145	112	196	9.6	4.0	8.8
14	6.2	7.7	5.8	7.6	11	15	107	209	264	10	4.1	7.6
15	6.2	7.1	6.9	10	10	14	104	313	239	12	5.2	11
16	5.2	7.2	8.1	9.6	10	13	83	377	197	12	6.9	11
17	5.6	7.2	7.0	9.5	10	14	64	329	141	13	4.5	12
18	6.2	7.6	7.1	9.1	9.6	15	36	152	105	17	4.3	12
19	6.3	7.6	7.0	8.7	9.4	17	45	119	77	11	4.6	13
20	6.2	7.5	6.3	8.9	9.0	18	59	145	63	12	5.1	13
21	6.0	7.4	5.8	8.7	10	19	84	146	50	12	5.1	15
22	6.2	8.4	5.6	8.6	11	32	38	196	39	10	4.8	13
23	6.6	8.5	5.9	9.0	11	39	25	204	31	11	4.9	16
24	6.4	8.2	6.4	9.2	11	34	51	248	28	11	4.7	15
25	6.2	7.8	6.6	8.5	12	29	111	241	28	7.6	4.5	15
26	5.7	6.9	6.8	8.6	12	28	82	164	24	8.1	4.5	15
27	5.9	7.0	7.0	9.0	12	40	139	165	22	8.0	4.4	15
28	5.9	7.6	7.5	8.8	13	50	87	128	21	6.7	4.7	16
29	6.4	6.8	7.7	8.5	---	56	89	125	24	7.0	4.8	15
30	6.8	6.7	8.2	8.6	---	80	69	138	52	5.9	4.6	15
31	6.7	---	8.1	8.8	---	117	---	170	---	7.1	5.1	---
TOTAL	212.2	221.4	200.9	260.9	295.8	823	2678	4293	3505	387.2	162.5	325.4
MEAN	6.85	7.38	6.48	8.42	10.6	26.5	89.3	138	117	12.5	5.24	10.8
MAX	38	8.5	8.2	10	13	117	275	377	264	34	7.2	16
MIN	4.4	6.6	5.2	7.4	8.3	13	25	26	21	5.9	4.0	5.1
AC-FT	421	439	398	517	587	1630	5310	8520	6950	768	322	645

CAL YR 1977 TOTAL 2468.82 MEAN 6.76 MAX 64 MIN .35 AC-FT 4900
WTR YR 1978 TOTAL 13365.30 MEAN 36.6 MAX 377 MIN 4.0 AC-FT 26510

09144250 GUNNISON RIVER AT DELTA, CO

LOCATION.--Lat 38°45'01", long 108°04'06", in SE¼NE¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020005, on left bank near upstream side of U.S. Highway 50 bridge at north edge of Delta.

DRAINAGE AREA.--5,628 mi² (14,577 km²).

PERIOD OF RECORD.--May 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,919.97 ft (1,499.607 m) National Weather Service Datum (levels by National Weather Service). Daily readings from April to June, from wire-weight gage, collected by National Weather Service since April 1912. Wire-weight gage removed March, 1978.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, and many diversions for irrigation. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,850 ft³/s (194 m³/s) May 17, 1978, gage height, 8.23 ft (2.509 m); minimum daily, 208 ft³/s (5.89 m³/s) Aug. 11, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height observed, 13.5 ft (4.11 m) June 6, 1957, from National Weather Service wire-weight gage at same datum (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,850 ft³/s (194 m³/s) at 0600 May 17, gage height, 8.23 ft (2.509 m); minimum daily, 299 ft³/s (8.47 m³/s) Jan. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	430	480	421	614	653	1520	1810	3350	3260	425	660
2	337	440	470	402	596	714	1390	1740	3630	3100	375	720
3	341	430	480	415	592	752	1050	1840	3640	3030	383	680
4	338	420	500	428	586	750	1140	1990	3450	2740	359	660
5	333	420	480	434	595	757	1170	1710	3170	2600	379	740
6	341	430	480	438	613	785	1160	1600	2930	1840	377	780
7	636	450	460	379	634	752	1250	1630	3240	1680	370	780
8	553	510	449	303	642	716	1580	1520	3360	1180	359	740
9	457	480	437	299	619	677	1780	1370	3370	1110	341	790
10	426	470	427	532	625	674	1510	1450	4050	1140	685	680
11	405	480	437	606	639	671	1280	1650	4610	1110	800	790
12	408	500	435	613	622	674	1500	1810	4410	1090	681	770
13	422	500	432	605	612	687	1770	2160	5040	1010	644	740
14	435	480	429	592	607	662	1570	2840	5710	993	680	730
15	421	480	431	614	604	645	1670	3980	5680	840	650	800
16	396	470	446	656	616	627	1660	4920	5800	876	650	860
17	387	450	423	624	612	635	1690	5870	5620	993	640	960
18	378	450	417	615	596	638	1380	4880	4520	1300	653	880
19	380	460	403	605	606	653	1330	3970	4230	1810	642	930
20	386	460	400	613	626	682	1400	3920	4140	1890	607	950
21	381	450	394	615	626	656	1660	4040	3880	1830	628	1000
22	382	470	401	609	592	637	1510	4560	3750	1800	876	1010
23	392	490	440	602	625	623	1320	4680	3700	1810	663	1080
24	402	480	450	620	626	587	1430	5120	3640	1680	686	1100
25	394	470	448	588	631	579	1780	4840	3680	1050	759	1030
26	390	480	424	594	640	519	1980	4630	3560	949	730	1010
27	380	480	425	609	651	541	2500	4430	3180	922	730	1100
28	380	500	434	592	682	621	2110	3850	3100	899	700	1200
29	370	500	434	591	---	657	1970	3510	3200	887	680	1100
30	380	480	438	589	---	734	1980	3670	4340	892	660	1000
31	380	---	444	611	---	898	---	3400	---	894	720	---
TOTAL	12348	14010	13648	16814	17329	20856	47060	99390	119980	47205	18532	26270
MEAN	398	467	440	542	619	673	1569	3206	3999	1523	598	876
MAX	636	510	500	656	682	898	2500	5870	5800	3260	876	1200
MIN	333	420	394	299	586	519	1050	1370	2930	840	341	660
AC-FT	24490	27790	27070	33350	34370	41370	93340	197100	238000	93630	36760	52110

CAL YR 1977 TOTAL 189090 MEAN 518 MAX 1680 MIN 208 AC-FT 375100
WTR YR 1978 TOTAL 453442 MEAN 1242 MAX 5870 MIN 299 AC-FT 899400

NOTE.--NO GAGE-HEIGHT RECORD OCT. 26 TO DEC. 8, AUG. 26 TO SEPT. 30.

09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO

LOCATION.--Lat 38°11'02", long 107°44'43", in SW¼NE¼ sec.4, T.45 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 15 ft (5 m) upstream from bridge, 0.2 mi (0.3 km) downstream from Dry Creek, 0.5 mi (0.8 km) upstream from Dallas Creek, and 2.3 mi (3.7 km) north of Ridgway.

DRAINAGE AREA.--149 mi² (386 km²).

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,877.58 ft (2,096.286 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. Diversions for irrigation above station. Water is imported above station in some years by Red Mountain ditch from Mineral Creek in San Juan River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--20 years, 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) Sept. 6, 1970, gage height, 5.38 ft (1.640 m); minimum daily, 26 ft³/s (0.74 m³/s) Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft³/s (47.6 m³/s) at 2330 June 15, gage height, 5.10 ft (1.554 m), only peak above base of 1,000 ft³/s (28 m³/s); minimum daily, 31 ft³/s (0.88 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	58	49	40	40	39	167	134	498	700	220	98
2	52	68	50	38	40	41	110	122	545	690	200	92
3	51	72	52	37	40	47	99	110	600	665	190	88
4	51	65	54	40	40	47	96	107	600	615	178	84
5	52	63	51	40	38	47	98	107	490	535	172	78
6	58	70	49	40	38	46	84	101	494	474	165	74
7	152	74	50	41	40	46	81	99	540	450	163	81
8	84	65	49	40	40	46	101	94	600	458	156	83
9	71	50	49	40	40	48	114	94	752	494	150	81
10	65	55	49	41	40	51	110	132	1060	600	150	81
11	65	58	49	41	40	52	103	152	1070	640	145	77
12	67	60	50	41	38	52	124	172	1180	565	145	74
13	67	59	46	41	38	49	124	212	1200	530	147	74
14	65	59	48	38	37	47	108	309	1300	490	141	72
15	63	56	48	41	37	40	108	418	1390	502	130	72
16	61	55	47	42	37	38	118	494	1300	550	120	72
17	60	52	46	44	37	41	108	458	1060	540	114	75
18	58	52	48	43	38	51	92	285	944	605	118	78
19	58	51	46	40	35	61	89	270	957	494	118	80
20	58	49	41	40	34	68	92	309	1030	454	116	81
21	58	48	40	40	31	75	114	322	985	426	118	77
22	56	52	39	38	32	88	110	294	957	398	120	74
23	55	51	40	40	34	91	103	398	944	358	122	72
24	52	51	40	38	38	78	124	454	1030	329	116	72
25	51	51	39	40	37	70	161	438	1200	300	116	72
26	50	51	35	39	37	72	178	398	1020	276	114	71
27	49	50	38	39	36	88	218	426	818	267	107	71
28	47	51	38	38	37	98	172	336	818	255	103	71
29	46	51	39	39	---	92	154	336	830	261	98	70
30	55	52	39	38	---	114	156	446	700	243	99	67
31	51	---	40	40	---	132	---	520	---	231	101	---
TOTAL	1880	1699	1398	1237	1049	1955	3616	8547	26912	14395	4252	2312
MEAN	60.6	56.6	45.1	39.9	37.5	63.1	121	276	897	464	137	77.1
MAX	152	74	54	44	40	132	218	520	1390	700	220	98
MIN	46	48	35	37	31	38	81	94	490	231	98	67
AC-FT	3730	3370	2770	2450	2080	3880	7170	16950	53380	28550	8430	4590

CAL YR 1977 TOTAL 26858 MEAN 73.6 MAX 312 MIN 30 AC-FT 53270
WTR YR 1978 TOTAL 69252 MEAN 190 MAX 1390 MIN 31 AC-FT 137400

09147500 UNCOMPAHGRE RIVER AT COLONA, CO

LOCATION.--Lat 38°19'53", long 107°46'44", in NW¼NW¼ sec.17, T.47 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 15 ft (5 m) downstream from county highway bridge, 0.2 mi (0.3 km) north of Colona, and 1.0 mi (1.6 km) upstream from Beaton Creek.

DRAINAGE AREA.--443 mi² (1,147 km²).

PERIOD OF RECORD.--April 1903 to November 1905, April to June 1906 (gage heights and discharge measurements only), October 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Colona" 1904-6, 1922-34.

REVISED RECORDS.--WSP 1313: 1904. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,318.80 ft (1,925.970 m), National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Sept. 30, 1949.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by water diverted from West Fork Cimarron Creek, Mineral Creek (San Juan River basin), and Leopard Creek (Dolores River basin), diversions for irrigation of about 19,000 acres or 76.9 km² (part of which is below station), and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--68 years (water years 1904-5, 1913-78), 263 ft³/s (7.446 m³/s), 190,500 acre-ft/yr (235 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,080 ft³/s (116 m³/s) June 13, 14, 1921; minimum daily, 12 ft³/s (0.34 m³/s) Sept. 19, 1956, May 7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) at 0200 June 15, gage height, 4.72 ft (1.439 m); minimum daily, 33 ft³/s (0.935 m³/s) Oct. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	65	68	47	57	59	308	219	663	943	230	109
2	33	84	72	54	49	63	219	193	690	916	215	101
3	33	112	76	65	53	72	189	174	757	883	203	92
4	33	106	78	66	59	74	173	179	786	741	195	86
5	34	103	72	62	63	72	185	173	652	647	176	78
6	36	101	63	62	62	71	161	190	635	571	166	71
7	167	123	70	62	61	70	153	192	699	530	155	69
8	102	110	70	55	62	67	200	177	813	531	143	70
9	73	78	65	67	51	73	230	201	1000	524	132	71
10	64	82	71	64	65	80	219	297	1170	710	129	70
11	59	95	68	62	60	80	194	314	1120	869	127	70
12	57	97	74	63	58	79	246	320	1140	709	127	71
13	59	91	62	61	55	73	256	368	1310	647	128	70
14	61	90	69	58	59	69	227	518	1550	567	128	71
15	59	91	71	67	59	58	239	651	1540	538	124	71
16	59	87	69	65	56	53	265	768	1540	600	118	73
17	59	86	53	65	51	61	235	702	1280	651	111	73
18	56	84	52	67	44	80	181	459	1160	765	115	74
19	56	83	52	59	60	100	175	397	1160	600	123	73
20	57	76	51	63	60	109	188	451	1330	524	130	74
21	59	76	51	62	61	130	230	519	1280	501	135	74
22	60	88	54	55	58	161	217	481	1350	467	140	73
23	59	82	57	61	55	165	181	586	1420	423	141	71
24	56	77	57	59	56	147	217	654	1400	389	140	70
25	55	82	59	67	58	117	293	613	1610	348	136	67
26	55	83	53	70	59	122	348	538	1520	323	134	66
27	54	77	60	63	56	149	411	580	1200	300	127	64
28	53	77	60	53	58	174	301	460	1160	288	131	63
29	54	74	59	67	---	156	264	426	1060	282	131	61
30	63	75	60	58	---	205	275	539	935	262	124	60
31	64	---	60	62	---	237	---	664	---	245	116	---
TOTAL	1823	2635	1956	1911	1605	3226	6980	13003	33930	17294	4430	2206
MEAN	58.8	87.8	63.1	61.6	57.3	104	233	419	1131	558	143	73.5
MAX	167	123	78	70	65	237	411	768	1610	943	230	109
MIN	33	65	51	47	44	53	153	173	635	245	111	60
AC-FT	3620	5230	3880	3790	3180	6400	13840	25790	67300	34300	8790	4380

CAL YR 1977 TOTAL 33294 MEAN 91.2 MAX 381 MIN 33 AC-FT 66040

WTR YR 1978 TOTAL 90999 MEAN 249 MAX 1610 MIN 33 AC-FT 180500

09149400 SPRING CREEK NEAR BEAVER HILL, CO

LOCATION.--Lat 38°23'32", long 107°56'40", in NW¼NW¼ sec.26, T.48 N., R.10 W., Montrose County, Hydrologic Unit 14020006, on left bank 7.2 mi (11.6 km) southwest of Montrose.

DRAINAGE AREA.--41.6 mi² (107.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,570 ft (1,698 m), from topographic map. Prior to Nov. 23, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 218 ft³/s (6.17 m³/s) May 16, 1978, gage height, 3.55 ft (1.082 m); no flow for many days in 1977-78.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 218 ft³/s (6.17 m³/s) at 2300 May 16, gage height, 3.55 ft (1.082 m), only peak above base of 100 ft³/s (2.83 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.20	.28	.53	8.8	47	83	3.4	.00	.00
2	.00	.00	.00	.20	.25	.72	7.3	46	77	2.2	.00	.00
3	.00	.00	.00	.20	.22	1.0	5.2	39	69	1.7	.00	.00
4	.00	.00	.00	.20	.25	.92	4.1	41	61	1.4	.00	.00
5	.00	.00	.00	.22	.25	.72	4.2	43	57	1.1	.00	.00
6	.00	.00	.00	.22	.28	.65	3.9	43	51	.87	.00	.00
7	.00	.00	.00	.25	.28	.59	4.1	39	43	.68	.00	.00
8	.00	.00	.00	.28	.34	.46	7.0	35	41	.53	.00	.00
9	.00	.00	.00	.28	.31	.52	8.7	32	38	.46	.00	.00
10	.00	.00	.00	.28	.37	.62	6.8	32	36	.51	.00	.00
11	.00	.00	.00	.28	.37	.66	5.5	41	33	1.6	.00	.00
12	.00	.00	.00	.28	.44	.53	8.2	55	29	1.0	.00	.00
13	.00	.00	.00	.25	.34	.47	11	70	27	.53	.00	.00
14	.00	.00	.00	.25	.44	.39	11	93	23	.28	.00	.00
15	.00	.00	.00	.34	.44	.33	13	143	21	.18	.00	.00
16	.00	.00	.02	.37	.44	.31	17	174	17	1.3	.00	.00
17	.00	.00	.05	.37	.37	.34	16	188	16	.69	.00	.00
18	.00	.00	.05	.37	.34	.41	13	150	14	.85	.00	7.0
19	.00	.00	.05	.34	.37	.53	12	148	13	.63	.00	.00
20	.00	.00	.05	.34	.40	.66	13	140	12	.32	.00	.00
21	.00	.00	.10	.34	.44	.82	19	135	11	.17	.00	.00
22	.00	.00	.10	.34	.40	1.3	19	134	10	.11	.00	.00
23	.00	.00	.10	.37	.48	2.2	18	136	9.1	.06	.00	.00
24	.00	.00	.10	.37	.48	1.5	21	141	7.4	.04	.00	.00
25	.00	.00	.10	.37	.48	1.2	26	129	6.4	.03	.00	.00
26	.00	.00	.15	.28	.48	.90	34	120	5.4	.02	.00	.00
27	.00	.00	.15	.28	.53	1.2	46	112	5.0	.01	.00	.00
28	.00	.00	.15	.25	.53	1.6	45	97	4.0	.00	.00	.00
29	.00	.00	.15	.28	---	1.6	48	90	5.3	.00	.00	.00
30	.00	.00	.15	.28	---	2.1	51	88	4.8	.00	.00	.00
31	.00	---	.20	.31	---	3.5	---	88	---	.00	.00	---
TOTAL	.00	.00	1.67	8.99	10.60	29.28	506.8	2869	829.4	20.67	.00	7.00
MEAN	.000	.000	.054	.29	.38	.94	16.9	92.5	27.6	.67	.000	.23
MAX	.00	.00	.20	.37	.53	3.5	51	188	83	3.4	.00	7.0
MIN	.00	.00	.00	.20	.22	.31	3.9	32	4.0	.00	.00	.00
AC-FT	.00	.00	3.3	18	21	58	1010	5690	1650	41	.00	14

WTR YR 1978 TOTAL 4283.41 MEAN 11.7 MAX 188 MIN .00 AC-FT 8500

NOTE.--NO GAGE-HEIGHT RECORD NOV. 23 TO JAN. 4, AUG. 28 TO SEPT. 19.

09149400 SPRING CREEK NEAR BEAVER HILL, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1977 to September 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
JAN										
11...	1045	.28	1500	7.2	.60	12.2	22	<1	58	560
FEB										
16...	0900	.42	1150	8.2	--	10.4	3	K1	K10	370
MAR										
08...	0930	.47	880	8.1	--	9.7	7	<1	K48	290
APR										
05...	1000	4.9	280	7.6	--	10.1	15	--	--	130
MAY										
09...	1030	32	150	8.0	--	9.9	20	K19	K35	58
JUL										
12...	0930	1.1	380	8.2	--	10.6	12	K1400	K840	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN										
11...	340	170	32	160	3.0	6.3	260	0	210	650
FEB										
16...	170	110	22	110	2.5	4.7	240	0	200	390
MAR										
08...	120	88	18	85	2.2	4.4	210	0	170	280
APR										
05...	26	38	9.1	18	.7	2.3	130	0	110	60
MAY										
09...	10	15	4.5	4.3	.2	1.1	59	0	48	18
JUL										
12...	33	44	9.3	25	.9	2.8	140	0	110	75

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN										
11...	12	.4	7.8	1200	1170	1.63	.91	.02	.00	.23
FEB										
16...	6.3	.3	6.2	748	768	1.02	.85	.03	.00	.04
MAR										
08...	5.0	.3	5.7	594	590	.81	.75	.00	.00	.23
APR										
05...	3.2	.1	5.7	197	201	.27	2.62	.00	.01	.31
MAY										
09...	1.6	.1	6.0	93	81	.13	8.04	.07	.04	.48
JUL										
12...	2.3	.2	7.5	242	236	.33	.74	.00	.03	.26

K BASED ON NON-IDEAL COLONY COUNT.

09149400 SPRING CREEK NEAR BEAVER HILL, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
JAN									
11...	.23	.25	.02	.01	200	30	2.3	.9	13
FEB									
16...	.04	.07	.01	.01	150	10	3.6	.1	64
MAR									
08...	.23	.23	.06	.01	140	10	2.1	.2	50
APR									
05...	.32	.32	.02	.01	50	40	6.9	.5	99
MAY									
09...	.52	.59	.02	.01	40	130	6.8	.3	38
JUL									
12...	.29	.29	.01	.01	80	70	5.1	.3	--

DATE	TIME	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
JAN											
11...	1045	1200	<1	10	1	1	16	100	0	10	0
APR											
05...	1000	--	--	20	--	1	14	--	100	350	--
JUL											
12...	0930	--	--	50	--	1	--	--	200	--	--

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	BERYLLIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)
JAN											
11...	0	1	1	0	1	10	10	5	0	0	5
APR											
05...	10	0	--	2	2	--	0	40	--	0	3
JUL											
12...	0	--	--	1	--	--	10	--	--	1	--

DATE	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
JAN											
11...	1	11	4	0	10	470	470	30	30	3200	.0
APR											
05...	1	3	--	5	10	--	50	--	10	7800	--
JUL											
12...	2	--	--	2	--	--	80	--	30	--	--

09149400 SPRING CREEK NEAR BEAVER HILL, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
JAN											
11...	.0	.0	2	2	0	5	1	10	0	0	0
APR											
05...	.0	.0	--	0	1	--	2	0	--	0	0
JUL											
12...	.0	--	--	1	--	--	2	--	--	0	--

DATE	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)
JAN										
11...	.0	20	0	32	<12	<.4	8.8	.4	7.6	.5
APR										
05...	.0	--	10	30	--	--	--	--	--	--
JUL										
12...	.0	--	10	--	--	--	--	--	--	--

DATE	TEMPERATURE (DEG C)
JAN	
11...	2.0
11...	2.0
FEB	
16...	.5
16...	.5
MAR	
06...	7.0
08...	3.0
08...	3.0
27...	12.0
APR	
05...	6.0
05...	6.0
14...	9.0

DATE	TEMPERATURE (DEG C)
APR	
26...	12.0
MAY	
09...	4.0
09...	4.0
22...	9.0
JUN	
07...	8.0
07...	8.0
14...	14.0
JUL	
12...	16.0
12...	16.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
JAN				
11...	1030	.28	2	<.01
FEB				
16...	1000	.30	4	<.01
MAR				
08...	0920	.45	111	.13
APR				
05...	1000	4.9	11	.15
MAY				
09...	1000	31	15	1.3
JUN				
07...	1000	43	54	6.3
JUL				
12...	0930	1.1	12	.04

09149400 SPRING CREEK NEAR BEAVER HILL, CO--Continued

PHYTOPLANKTON DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	JAN 11,78	FEB 16,78	MAR 8,78	APR 5,78	MAY 9,78	JUN 7,78
TIME	1045	0900	0930	1000	1030	1000
TOTAL CELLS/ML	13	64	50	99	38	290
DIVERSITY: DIVISION	0.0	1.5	0.6	0.0	0.0	1.0
.CLASS	0.0	2.0	0.6	0.0	0.0	1.0
..ORDER	0.0	2.0	0.6	0.0	0.0	1.0
...FAMILY	0.0	2.0	2.1	1.8	0.0	1.0
....GENUS	0.0	2.0	2.1	2.1	0.0	1.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	13#	100	16#	25	7	14	--	-	--	-	45#	15
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	14	14	--	-	--	-
...DIATOMACEAE												
....DIATOMA	--	-	16#	25	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
....SYNEDRA	--	-	--	-	7	14	--	-	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	--	-	22#	43	--	-	--	-	--	-
...NAVICULACEAE												
....GYROSIGMA	--	-	--	-	--	-	14	14	--	-	--	-
....NAVICULA	--	-	--	-	7	14	14	14	38#	100	22	8
...NITZSCHIACEAE												
....NITZSCHIA	--	-	--	-	7	14	14	14	--	-	--	-
...SURIRELLACEAE												
....SURIRELLA	--	-	--	-	--	-	42#	43	--	-	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....OCHROMONAS	--	-	16#	25	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..HORMOGONALES												
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	220#	77
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	16#	25	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09149420 SPRING CREEK NEAR MONTROSE, CO

LOCATION.--Lat 38°31'26", long 107°58'15", in NE¼SE¼ sec.10, T.49 N., R.10 W., Montrose County, Hydrologic Unit 14020006, on left bank 0.8 mi (1.3 km) upstream from mouth and 3.2 mi (5.1 km) northwest of Montrose.

DRAINAGE AREA.--76.6 mi² (198.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,570 ft (1,698 m), from topographic map. Prior to Nov. 10, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by diversions and return flow from irrigated areas. Most flow is return flow. Several observations of water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft³/s (8.35 m³/s) May 17, 1978, gage height, 3.78 ft (1.152 m); minimum daily, 7.3 ft³/s (0.207 m³/s) Mar. 17, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 295 ft³/s (8.35 m³/s) at 0300 May 17, gage height, 3.78 ft (1.152 m); minimum daily, 7.3 ft³/s (0.21 m³/s) Mar. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	39	16	12	9.0	7.7	20	118	98	63	72	65
2	57	38	16	12	9.0	7.7	22	114	102	62	72	65
3	56	37	16	11	9.0	7.7	18	111	97	62	71	69
4	55	36	15	11	9.0	7.7	21	110	94	60	76	70
5	54	35	16	12	9.0	7.7	24	126	101	62	79	71
6	54	34	15	11	9.0	7.7	39	134	99	64	59	67
7	53	33	16	11	9.0	7.6	35	136	91	63	56	69
8	52	32	16	10	9.0	7.7	36	135	86	64	50	69
9	51	31	15	11	8.5	7.5	47	100	86	63	51	67
10	50	30	15	11	8.5	7.5	49	84	87	65	60	66
11	50	30	16	10	8.5	7.5	41	86	83	67	52	64
12	49	29	17	10	8.5	7.7	35	92	78	66	60	65
13	48	27	15	10	8.5	7.7	36	120	77	61	60	66
14	47	27	14	9.6	8.5	7.5	38	162	75	61	62	68
15	46	26	15	9.9	8.5	7.5	42	218	81	64	51	67
16	46	26	15	10	8.0	7.4	45	238	81	68	51	62
17	45	26	13	10	8.0	7.3	48	253	77	78	57	65
18	45	26	14	10	8.0	7.4	51	197	77	68	54	70
19	44	24	13	10	7.7	7.7	48	169	75	66	54	69
20	43	23	12	10	7.6	8.3	49	157	75	68	53	70
21	43	21	12	10	7.8	8.5	54	165	84	64	56	71
22	43	21	12	9.5	7.6	9.3	51	160	82	63	60	70
23	43	20	14	9.5	7.6	8.2	53	158	79	62	57	65
24	42	19	12	9.5	7.5	8.5	55	168	77	61	57	63
25	42	19	12	9.5	7.7	8.6	60	158	74	61	60	62
26	42	18	12	9.5	7.8	8.6	69	145	70	63	56	61
27	41	18	13	9.5	7.7	8.4	90	125	68	70	51	58
28	41	18	13	9.0	7.6	9.0	118	111	66	70	67	59
29	41	16	13	9.0	---	12	119	99	69	71	55	59
30	40	17	13	9.0	---	13	127	96	68	77	56	58
31	40	---	12	9.0	---	13	---	99	---	76	56	---
TOTAL	1460	796	438	314.5	232.1	259.6	1540	4344	2457	2033	1943	1971
MEAN	47.1	26.5	14.1	10.1	8.29	8.37	51.3	140	81.9	65.6	62.7	65.7
MAX	57	39	17	12	9.0	13	127	253	102	78	79	71
MIN	40	16	12	9.0	7.5	7.3	18	84	66	60	53	58
AC-FT	2900	1580	869	624	460	515	3050	8620	4870	4030	3850	3910

WTR YR 1978 TOTAL 17788.2 MEAN 48.7 MAX 253 MIN 7.3 AC-FT 35280

NOTE.--NO GAGE-HEIGHT RECORD OCT. 1 TO NOV. 9, JAN. 16 TO FEB. 17.

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

PERIOD OF RECORD.--December 1977 to September 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
DEC 08...	1100	16	1280	7.4	--	10.8	19	K14	38	770
JAN 12...	1130	10	1320	7.8	2.1	11.0	28	<8	280	780
FEB 16...	1200	7.9	1440	8.4	--	11.2	17	<1	K100	750
MAR 08...	1145	7.9	1680	8.4	--	10.4	8	<1	190	750
APR 05...	1400	27	800	7.9	--	12.8	24	--	--	410
MAY 09...	1400	108	700	8.2	--	8.8	20	400	1100	340
JUN 07...	1330	92	760	8.3	--	8.2	15	1100	720	400
JUL 12...	1300	68	850	8.4	--	6.4	19	--	K1600	460
AUG 15...	0930	63	850	8.2	--	9.4	26	K460	2900	460

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
DEC 08...	530	200	65	46	.7	2.5	290	0	240	560
JAN 12...	560	200	68	49	.8	2.5	270	0	220	570
FEB 16...	520	190	68	49	.8	2.4	290	0	240	550
MAR 08...	520	190	67	50	.8	2.5	280	1	230	550
APR 05...	240	110	34	30	.6	3.4	210	0	170	280
MAY 09...	190	93	27	21	.5	3.1	190	0	160	220
JUN 07...	230	110	30	22	.5	2.8	210	0	170	240
JUL 12...	260	130	34	25	.5	3.2	210	20	210	270
AUG 15...	270	130	34	25	.5	2.8	240	0	200	290

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
DEC 08...	9.7	.7	19	1090	1050	1.48	47.1	2.5	.01	.23
JAN 12...	10	.8	22	1110	1060	1.51	30.9	2.8	.01	.31
FEB 16...	13	.9	20	1100	1040	1.50	23.6	2.8	.06	.05
MAR 08...	10	.8	17	1060	1030	1.44	22.6	2.6	.02	.26
APR 05...	6.5	.6	14	607	582	.83	44.3	.87	.01	.96
MAY 09...	4.5	.5	13	489	476	.67	143	.63	.01	.83
JUN 07...	4.5	.6	15	568	529	.77	142	1.3	.01	.61
JUL 12...	4.9	.7	17	671	609	.91	123	1.4	.03	.76
AUG 15...	4.7	.6	17	638	623	.87	109	1.4	.02	.52

K BASED ON NON-IDEAL COLONY COUNT.

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
DEC									
08...	.26	2.7	.01	.00	160	30	7.7	1.0	290
JAN									
12...	.32	3.1	.02	.02	180	10	3.0	.9	430
FEB									
16...	.11	2.9	.02	.01	160	10	3.1	.4	310
MAR									
08...	.28	2.9	.03	.01	150	10	2.7	.3	170
APR									
05...	.97	1.8	.16	--	90	20	3.9	1.3	960
MAY									
09...	.84	1.5	.09	.02	80	10	4.5	.8	1000
JUN									
07...	.62	1.9	.06	.02	100	60	3.0	.7	850
JUL									
12...	.79	2.2	.11	.03	110	60	4.5	.9	--
AUG									
15...	.54	1.9	.05	.03	120	20	3.2	.6	--

DATE	TIME	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
JAN											
12...	1130	1200	0	10	1	1	5	100	0	0	0
APR											
05...	1400	--	--	20	--	2	6	--	100	400	--
JUL											
12...	1300	--	--	70	--	1	--	--	200	--	--

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	BERYLLIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)
JAN											
12...	0	0	0	1	1	0	0	2	0	0	<5
APR											
05...	0	0	--	1	1	--	0	30	--	0	3
JUL											
12...	0	--	--	1	--	--	10	--	--	2	--

DATE	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
JAN											
12...	3	6	5	2	10	100	100	60	40	1400	.0
APR											
05...	1	0	--	0	40	--	50	--	50	940	--
JUL											
12...	3	--	--	2	--	--	50	--	20	--	--

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)
JAN											
12...	.0	.0	2	1	0	5	1	<5	3	3	0
APR											
05...	.0	.0	--	2	0	--	2	0	--	0	0
JUL											
12...	.0	--	--	3	--	--	4	--	--	1	--

DATE	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP, TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP, TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP, TOTAL (PCI/L AS SR/YT-90)
JAN										
12...	.0	20	10	22	<13	<.4	2.8	.4	2.4	.4
APR										
05...	1.0	--	20	20	--	--	--	--	--	--
JUL										
12...	.7	--	10	--	--	--	--	--	--	--

DATE	TEMPER-ATURE (DEG C)	DATE	TEMPER-ATURE (DEG C)
DEC		APR	
08...	6.0	26...	16.0
08...	6.0	MAY	
JAN		09...	12.0
12...	7.5	09...	12.0
12...	7.5	22...	12.0
FEB		JUN	
16...	6.0	07...	16.0
16...	6.0	07...	16.0
MAR		14...	15.0
08...	8.5	JUL	
08...	9.0	12...	17.0
13...	4.5	12...	19.0
31...	13.0	27...	20.0
APR		AUG	
05...	11.0	14...	15.0
05...	11.0	15...	12.0
14...	14.0		

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
08...	1045	16	23	.99
JAN				
17...	1100	10	26	.72
FEB				
16...	1250	8.7	25	.59
MAR				
08...	1230	7.8	29	.61
APR				
05...	1410	27	244	18
MAY				
09...	1345	108	240	70
JUN				
07...	1330	92	221	55
JUL				
12...	1300	68	401	74
AUG				
15...	0930	63	293	50

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

PHYTOPLANKTON DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	DEC 8,77 1100	JAN 12,78 1130	FEB 16,78 1200	MAR 8,78 1145
TOTAL CELLS/ML	290	430	310	170
DIVERSITY: DIVISION	0.1	0.4	0.6	0.0
.CLASS	0.1	0.4	0.6	0.0
..ORDER	0.1	0.4	1.0	0.0
...FAMILY	2.0	1.2	2.4	1.4
....GENUS	2.0	1.2	2.4	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	8	3	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	24	8	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	7	4
....COCCONEIS	4	2	13	3	8	3	--	-
...CYMBELLACEAE								
....CYMBELLA	18	6	13	3	8	3	7	4
...DIATOMACEAE								
....DIATOMA	13	5	--	-	*	0	*	0
...FRAGILARIACEAE								
....SYNEDRA	22	8	--	-	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	27	9	--	-	40	13	7	4
...NAVICULACEAE								
....FRUSTULIA	--	-	--	-	--	-	--	-
....NAVICULA	170#	58	330#	76	150#	50	130#	75
...NITZSCHIACEAE								
....NITZSCHIA	31	11	--	-	24	8	14	8
...SURIRELLACEAE								
....SURIRELLA	--	-	38	9	16	5	7	4
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	24	8	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	4	2	38	9	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09149420 SPRING CREEK NEAR MONTROSE, CO--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO JUNE 1978

DATE	APR 5,78		MAY 9,78		JUN 7,78	
TIME	1400		1400		1330	
TOTAL CELLS/ML	960		1000		850	
DIVERSITY: DIVISION	0.0		1.4		1.1	
.CLASS	0.0		1.4		1.1	
..ORDER	0.2		1.7		1.3	
...FAMILY	2.1		2.7		2.0	
....GENUS	2.3		2.7		2.4	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	95	9	22	3
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	29	3	57	6	22	3
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	14	1	--	-	--	-
....COCCONEIS	14	1	19	2	--	-
...CYMBELLACEAE						
....CYMBELLA	*	0	19	2	--	-
...DIATOMACEAE						
....DIATOMA	43	4	57	6	22	3
...FRAGILARIACEAE						
....SYNEDRA	29	3	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	140	15	19	2	67	8
...NAVICULACEAE						
....FRUSTULIA	14	1	--	-	--	-
....NAVICULA	520#	54	310#	30	360#	42
...NITZSCHIACEAE						
....NITZSCHIA	72	7	76	8	22	3
...SURIRELLACEAE						
....SURIRELLA	86	9	38	4	22	3
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	310#	30	180#	21
....OSCILLATORIA	--	-	--	-	130#	16
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	19	2	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09149500 UNCOMPAHGRE RIVER AT DELTA, CO

LOCATION.--Lat 38°44'31", long 108°04'49", in SW¼SW¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020006, on right bank 525 ft (160 m) downstream from 5th Street Bridge at west edge of Delta and 1.1 mi (1.8 km) upstream from mouth.

DRAINAGE AREA.--1,129 mi² (2,924 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1903 to October 1931 (no winter records in most years), September 1938 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Delta" 1907-24.

REVISED RECORDS.--WSP 1243: 1904. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,926.49 ft (1,501.594 m), National Geodetic Vertical Datum of 1929. Feb. 18, 1960, to Mar. 26, 1963, water-stage recorder at site 750 ft (230 m) upstream at datum 3.43 ft (1.045 m) higher. Mar. 27, 1963, to May 12, 1965, water-stage recorder at site 1,050 ft (320 m) upstream at datum 6.08 ft (1.045 m) higher. See WSP 1733 or 1924 for history of changes prior to Feb. 18, 1960.

REMARKS.--Records good. Natural flow of stream affected by water diverted from Gunnison River (see record of diversion through Gunnison tunnel published with station 09128000) and other adjacent basins, diversions for irrigation of about 90,000 acres (364 km²) above station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--42 years (water years 1908, 1921, 1939-78), 276 ft³/s (7.816 m³/s), 200,000 acre-ft/yr (247 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 3,730 ft³/s (106 m³/s) May 5,1941, gage height, 5.90 ft (1.798 m), site and datum then in use, from rating curve extended above 1,900 ft³/s (54 m³/s); no flow at times in 1908; minimum daily determined since beginning of diversion through Gunnison tunnel, 7 ft³/s (0.20 m³/s) July 10-15, 17, 21, 24-28, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) at 1600 June 16, gage height, 5.64 ft (1.719 m); minimum daily, 45 ft³/s (1.27 m³/s) Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	144	194	125	134	74	365	279	574	302	160	150
2	108	122	189	107	117	82	449	275	602	262	145	152
3	108	108	193	126	107	82	263	241	537	284	139	152
4	106	113	194	140	109	85	170	235	569	360	133	138
5	106	137	190	143	123	91	178	286	515	318	131	135
6	108	219	177	140	136	94	322	428	430	208	130	125
7	143	238	172	126	135	86	295	495	382	228	123	144
8	164	250	177	119	131	79	285	398	479	209	125	205
9	116	256	166	121	124	74	356	304	637	203	115	188
10	114	236	171	148	123	77	407	326	1050	411	108	195
11	113	242	172	138	130	71	210	348	1300	526	109	204
12	117	243	176	136	123	72	151	343	1230	602	117	218
13	125	236	177	132	119	75	179	371	1000	443	126	242
14	127	229	160	123	119	78	208	531	1030	366	137	268
15	123	225	176	138	121	78	241	808	1130	305	139	292
16	125	211	182	154	117	60	295	642	1260	425	140	232
17	128	201	149	136	82	46	324	708	772	504	130	227
18	125	196	175	137	69	45	201	391	683	688	123	234
19	127	184	159	130	84	48	140	364	572	530	128	250
20	126	204	140	130	95	57	121	258	634	479	130	295
21	151	172	118	131	85	60	143	479	635	407	127	309
22	164	184	125	127	89	219	140	642	585	336	129	328
23	170	193	139	122	83	245	119	625	542	288	130	274
24	172	173	143	123	76	218	107	646	570	272	134	245
25	169	170	144	105	77	205	141	379	816	208	146	245
26	150	167	133	123	80	186	159	282	860	167	152	207
27	127	171	136	140	81	178	363	311	531	147	147	191
28	126	186	143	115	79	225	323	296	400	130	142	180
29	133	176	148	120	---	278	250	225	469	145	142	175
30	138	198	151	126	---	268	300	236	366	157	139	158
31	137	---	149	137	---	184	---	496	---	159	138	---
TOTAL	4053	5784	5018	4018	2948	3720	7205	12648	21160	10069	4114	6358
MEAN	131	193	162	130	105	120	240	408	705	325	133	212
MAX	172	256	194	154	136	278	449	808	1300	688	160	328
MIN	106	108	118	105	69	45	107	225	366	130	108	125
AC-FT	8040	11470	9950	7970	5850	7380	14290	25090	41970	19970	8160	12610

CAL YR 1977 TOTAL 50765 MEAN 139 MAX 922 MIN 44 AC-FT 100700
WTR YR 1978 TOTAL 87095 MEAN 239 MAX 1300 MIN 45 AC-FT 172800

09149500 UNCOMPAHGRE RIVER AT DELTA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Partial-record station May 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 18...	0945	125	2130	8.2	9.0	11.0	1000	760	270
DEC 07...	1530	180	2170	8.2	4.5	--	1000	800	250
APR 17...	1240	430	975	7.9	9.5	9.2	420	270	110

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 18...	80	140	1.9	4.4	300	0	250	990	13
DEC 07...	97	180	2.4	5.5	270	0	220	1100	16
APR 17...	35	66	1.4	3.8	180	0	150	380	7.9

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 18...	1.0	17	1680	2.28	567	3.7	.18	10	40
DEC 07...	.8	16	1820	2.48	885	3.7	.02	20	80
APR 17...	.5	12	711	.97	825	1.5	.04	40	40

09150500 ROUBIDEAU CREEK AT MOUTH, NEAR DELTA, CO

LOCATION.--Lat 38°44'06", long 108°09'40", in SE¼NE¼ sec.19, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020005, on left bank 90 ft (27 m) upstream from railroad bridge, 0.3 mi (0.5 km) upstream from mouth, and 5.0 mi (8.0 km) west of Delta.

DRAINAGE AREA.--242 mi^2 (627 km^2).

PERIOD OF RECORD.--October 1938 to September 1954, May 1976 to current year. Prior to April 1939, monthly discharge only, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 4,864.34 ft (1,482.651 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1948, at site 0.2 mi (0.3 km) upstream at datum 4.86 ft (1.481 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Part of discharge is return flow from lands irrigated under lower end of Ironstone Canal from Uncompahgre River. Diversions for irrigation of a few hundred acres above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years (water years 1939-54, 1977-78), 118 ft^3/s (3.342 m^3/s), 85,490 acre-ft/yr (105 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft^3/s (83.5 m^3/s) Aug. 5, 1945, gage height, 7.76 ft (2.365 m), site and datum then in use, from rating curve extended above 1,300 ft^3/s (37 m^3/s); minimum observed, 9.6 ft^3/s (0.27 m^3/s) Apr. 7, 1977 (discharge measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft^3/s (29.7 m^3/s) at 0400 May 17, gage height, 4.38 ft (1.335 m), only peak above base of 810 ft^3/s (23 m^3/s); minimum daily, 24 ft^3/s (0.680 m^3/s) Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	61	39	28	28	25	114	306	386	66	55	48
2	39	62	39	26	27	26	110	270	362	68	58	54
3	43	62	39	27	26	27	92	236	313	61	50	57
4	38	63	39	29	26	27	82	245	296	51	47	58
5	36	61	38	28	26	27	72	254	284	53	50	60
6	51	57	37	28	26	28	75	256	264	49	47	65
7	84	58	35	27	27	28	69	240	258	45	54	72
8	82	60	33	27	28	28	66	215	254	43	44	77
9	59	60	32	27	27	27	70	206	239	45	46	81
10	57	55	29	27	28	27	73	203	239	52	45	88
11	60	52	27	27	28	29	61	223	228	55	45	86
12	78	52	27	27	27	37	68	322	202	59	45	88
13	79	52	26	27	27	38	79	385	173	61	45	95
14	77	52	26	27	27	36	92	479	155	52	46	100
15	78	51	26	28	27	31	104	671	140	47	49	94
16	79	49	26	28	27	25	116	808	125	52	50	97
17	78	49	25	27	26	26	112	871	111	59	44	96
18	76	48	27	27	25	25	110	498	96	65	41	101
19	74	47	26	27	27	29	109	397	94	64	44	107
20	72	46	26	27	28	40	100	413	90	70	45	110
21	71	45	26	27	27	40	119	497	75	74	46	115
22	70	45	25	27	27	74	121	614	70	68	45	115
23	68	45	24	27	28	76	116	748	64	63	44	97
24	67	45	26	28	27	96	117	692	54	63	44	90
25	66	45	26	27	27	93	148	626	52	59	46	88
26	64	44	28	27	27	77	190	490	54	61	48	84
27	64	45	27	28	27	73	299	506	51	56	52	78
28	65	46	28	27	25	71	273	400	50	58	51	75
29	65	43	29	28	---	64	267	389	59	59	48	70
30	63	41	29	26	---	61	306	424	76	59	45	66
31	60	---	30	28	---	72	---	438	---	55	45	---
TOTAL	2002	1541	920	846	753	1383	3730	13322	4914	1793	1464	2512
MEAN	64.6	51.4	29.7	27.3	26.9	44.6	124	430	164	57.8	47.2	83.7
MAX	84	63	39	29	28	96	306	871	386	74	58	115
MIN	36	41	24	26	25	25	61	203	50	43	41	48
AC-FT	3970	3060	1820	1680	1490	2740	7400	26420	9750	3560	2900	4980

CAL YR 1977 TOTAL 15250 MEAN 41.8 MAX 179 MIN 12 AC-FT 30250
WTR YR 1978 TOTAL 35180 MEAN 96.4 MAX 871 MIN 24 AC-FT 69780

NOTE.--NO GAGE-HEIGHT RECORD OCT. 15 TO NOV. 25.

09151500 ESCALANTE CREEK NEAR DELTA, CO

LOCATION.--Lat 38°45'24", long 108°15'34", in E½ sec.8, T.15 S., R.97 W., Sixth Principal Meridian, Delta County, Hydrologic Unit 14020005, on left bank just upstream from county bridge, 0.2 mi (0.3 km) upstream from mouth, and 10.5 mi (16.9 km) west of Delta.

DRAINAGE AREA.--209 mi^2 (541 km^2).

PERIOD OF RECORD.--April 1922 to September 1923, May 1976 to current year.

REVISED RECORDS.--WSP 1313: 1923 (monthly runoff).

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft (1,463 m), from topographic map. Prior to September 1923, nonrecording gage at different datum operated by State Engineer of Colorado.

REMARKS.--Records good except those for period of no gage-height record and those for winter period, which are fair. Diversions above station for irrigation of land in drainage basin above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft^3/s (58.1 m^3/s) July 24, 1977, gage height, 8.54 ft (2.603 m), from floodmarks, from rating curve extended above 320 ft^3/s (9.1 m^3/s), on basis of slope-area measurement of peak flow; minimum daily, 0.02 ft^3/s (0.001 m^3/s) July 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 856 ft^3/s (24.2 m^3/s) at 0200 May 16, gage height, 4.77 ft (1.454 m); minimum daily, 0.24 ft^3/s (0.007 m^3/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	5.7	6.0	7.4	8.0	10	47	183	233	1.7	.37	.26
2	3.5	5.2	8.4	7.6	7.8	12	57	171	220	1.7	.36	.27
3	2.9	5.3	8.3	7.8	8.3	14	43	163	191	1.6	.37	.27
4	2.6	4.9	8.0	7.8	8.9	13	31	190	180	1.5	.39	.26
5	3.3	4.6	7.7	7.6	8.8	13	27	164	159	1.5	.38	.27
6	8.0	5.5	6.4	7.4	9.3	14	26	142	133	1.5	.33	.29
7	21	12	7.4	7.2	9.1	11	30	119	118	1.4	.33	.27
8	7.1	9.1	7.9	7.2	9.7	10	44	116	104	1.4	.32	.27
9	5.8	7.5	8.5	7.5	8.3	11	54	115	89	1.3	.32	.28
10	5.6	7.3	7.9	7.6	9.8	11	43	127	84	1.2	.31	.30
11	5.4	7.8	7.6	7.6	12	11	37	197	78	1.3	.31	.30
12	4.9	9.0	7.9	7.7	9.9	12	54	309	66	1.4	.30	.28
13	4.3	8.1	6.8	6.5	8.4	12	84	391	52	1.4	.29	.27
14	3.9	7.8	7.4	7.1	9.7	10	105	497	45	1.3	.28	.27
15	3.1	7.8	7.9	9.6	8.2	9.3	129	497	40	1.2	.29	.26
16	2.9	7.6	8.1	8.0	9.6	8.6	145	603	35	1.1	.29	.28
17	3.1	7.4	5.8	8.0	8.5	9.2	111	568	28	1.0	.30	.34
18	3.5	7.5	9.5	7.9	10	9.1	88	358	24	.98	.31	.34
19	3.4	8.1	7.7	8.0	13	9.6	94	353	20	.98	.31	.29
20	3.2	8.4	7.9	8.1	10	10	112	383	16	.96	.30	.28
21	3.3	7.3	6.5	8.0	9.0	10	149	417	13	.84	.31	.28
22	3.1	8.9	5.8	7.4	8.9	13	107	477	9.1	.77	.34	.27
23	3.4	7.8	9.3	8.5	9.2	15	91	501	6.8	.71	.33	.27
24	2.4	7.5	9.6	8.4	9.3	13	119	411	4.7	.65	.31	.27
25	2.8	7.7	9.2	8.3	9.9	13	164	370	3.0	.64	.30	.26
26	2.9	7.6	8.0	6.0	10	12	197	288	2.4	.59	.28	.26
27	3.0	7.5	7.4	5.7	10	12	244	300	2.3	.48	.26	.26
28	2.8	7.6	7.6	7.4	10	13	200	259	2.1	.46	.25	.27
29	3.0	7.1	7.7	7.6	---	15	203	251	2.0	.42	.24	.28
30	3.6	7.2	7.8	7.8	---	17	208	266	1.8	.42	.25	.29
31	4.5	---	7.6	8.0	---	23	---	268	---	.41	.25	---
TOTAL	135.0	222.8	239.6	236.7	263.6	375.8	3043	9454	1962.2	32.81	9.58	8.36
MEAN	4.35	7.43	7.73	7.64	9.41	12.1	101	305	65.4	1.06	.31	.28
MAX	21	12	9.6	9.6	13	23	244	603	233	1.7	.39	.34
MIN	2.4	4.6	5.8	5.7	7.8	8.6	26	115	1.8	.41	.24	.26
AC-FT	268	442	475	469	523	745	6040	18750	3890	65	19	17

CAL YR 1977 TOTAL 2171.29 MEAN 5.95 MAX 95 MIN .02 AC-FT 4310
WTR YR 1978 TOTAL 15983.45 MEAN 43.8 MAX 603 MIN .24 AC-FT 31700

NOTE.--NO GAGE-HEIGHT RECORD JUNE 25 TO SEPT. 30.

09152000 KANNAH CREEK NEAR WHITEWATER, CO

LOCATION.--Lat 38°57'42", long 108°13'47", in NW¼SW¼ sec.34, T.12 S., R.97 W., Mesa County, Hydrologic Unit 14020005, on right bank at downstream side of county bridge, 0.2 mi (0.3 km) downstream from intake of pipeline for Grand Junction water supply, and 12 mi (19 km) east of Whitewater.

DRAINAGE AREA.--61.9 mi^2 (160.3 km^2).

PERIOD OF RECORD.--October 1917 to September 1921, September 1922 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Kahnah Creek near Whitewater.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,060 ft (1,847 m), from topographic map. Prior to Sept. 30, 1932, nonrecording gage, and Sept. 30, 1932, to Oct. 14, 1935, water-stage recorder, at site 300 ft (91 m) upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Diversion above station for municipal supply of Grand Junction and minor diversion by Kaber ditch for irrigation of about 60 acres (243,000 m^2) below station. Records of municipal supply furnished by Colorado Division of Water Resources and monthly figures are adjusted to show total flow of stream. Daily figures are for stream below city and Kaber ditch diversions. Regulation by a few small reservoirs above station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE (COMBINED FLOW).--60 years (water years 1918-21, 1923-78), 37.8 ft^3/s (1.070 m^3/s), 27,390 acre-ft/yr (33.8 hm^3/yr).

EXTREMES (COMBINED FLOW) FOR PERIOD OF RECORD.--Maximum discharge observed, 1,640 ft^3/s (46.4 m^3/s) June 6, 1921, gage height, 4.5 ft (1.37 m), site and datum then in use, from rating curve extended above 700 ft^3/s (20 m^3/s); minimum daily, 3.4 ft^3/s (0.096 m^3/s) Nov. 27, 1976.

EXTREMES (COMBINED FLOW) FOR CURRENT YEAR.--Maximum discharge, 561 ft^3/s (15.9 m^3/s) at 2100 June 9, gage height, 2.38 ft (0.725 m); minimum daily, 3.9 ft^3/s (0.110 m^3/s) Mar. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.92	.12	.08	.20	.11	18	24	295	34	18	7.9
2	.70	.88	.16	.07	.25	.15	10	24	305	34	19	7.5
3	5.0	.70	.20	.08	.25	.15	5.0	24	300	27	19	7.5
4	4.3	.50	.15	.11	.25	.15	4.0	24	310	26	18	8.3
5	3.0	.25	.08	.08	.25	.08	5.8	22	327	24	17	11
6	1.2	.50	.27	.08	.28	.11	6.0	22	322	24	16	9.7
7	4.6	.90	.25	.08	.32	.08	10	22	330	22	16	9.7
8	1.4	.60	.15	.08	.40	.08	15	20	338	23	19	16
9	.70	.57	.16	.11	.40	.05	13	17	360	20	20	16
10	2.0	.58	.18	.11	.40	.05	13	17	384	23	19	15
11	2.5	.62	.18	.11	.40	.05	7.9	21	295	26	20	14
12	3.0	.66	.15	.11	.40	.05	12	22	265	23	19	13
13	3.2	.70	.15	.11	.25	.05	14	24	232	23	19	11
14	3.8	.11	.12	.11	.25	.05	11	41	228	23	19	11
15	1.1	.08	.08	.15	.30	.03	14	60	237	21	18	9.7
16	.30	.05	.08	.15	.40	.04	15	68	214	20	16	7.5
17	.20	.05	.10	.15	.38	.05	11	72	194	19	16	7.9
18	.15	.05	.09	.15	.36	.05	6.0	53	152	20	13	7.9
19	.15	.11	.07	.15	.42	.08	7.9	72	135	20	10	9.7
20	.25	.20	.05	.15	.48	.11	12	98	120	18	9.0	12
21	.60	.25	.06	.20	.48	.20	15	108	95	20	7.9	12
22	.60	.60	.07	.20	.47	1.6	12	120	82	17	9.7	12
23	.30	.40	.07	.20	.25	1.2	11	138	75	16	9.7	15
24	.30	.60	.08	.20	.15	1.0	12	190	68	16	9.1	14
25	.60	.60	.11	.20	.11	.25	16	186	58	15	7.5	6.6
26	.50	.20	.11	.15	.11	.20	19	166	51	13	7.5	6.2
27	.50	.08	.11	.20	.11	1.0	23	198	42	11	7.0	5.8
28	.40	.11	.08	.20	.11	3.0	21	210	37	13	6.6	5.8
29	.70	.09	.08	.20	---	5.4	24	265	39	14	7.5	5.8
30	1.2	.07	.08	.20	---	9.1	27	295	41	14	7.5	5.4
31	1.1	---	.08	.20	---	13	---	305	---	14	7.5	---
TOTAL	44.55	12.03	3.72	4.37	8.43	37.52	390.6	2928	5901	630	427.5	300.9
MEAN	1.44	.40	.12	.14	.30	1.21	13.0	94.5	197	20.3	13.8	10.0
MAX	5.0	.92	.27	.20	.48	13	27	305	384	34	20	16
MIN	.15	.05	.05	.07	.11	.03	4.0	17	37	11	6.6	5.4
AC-FT	88	24	7.4	8.7	17	74	775	5810	11700	1250	848	597
					ADJUSTED FOR DIVERSIONS							
MEAN	7.86	7.35	6.59	6.52	6.27	8.09	18.5	98.1	204	30.8	24.4	17.2
AC-FT	483	437	405	401	349	497	1110	6040	12100	1890	1500	1020

OBSERVED

CAL YR 1977 TOTAL 1863.50 MEAN 5.11 MAX 58 MIN .00 AC-FT 3700
WTR YR 1978 TOTAL 10688.62 MEAN 29.3 MAX 384 MIN .03 AC-FT 21200

ADJUSTED

MEAN 12.2 AC-FT 8810
MEAN 36.3 AC-FT 26300

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO

LOCATION.--Lat 38°59'00", long 108°27'00", near center of sec.14, T.2 S., R.1 E., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 180 ft (55 m) upstream from bridge on State Highway 141, 0.4 mi (0.6 km) downstream from Whitewater Creek, 0.5 mi (0.8 km) south of Whitewater, and 9 mi (13 km) southeast of Grand Junction.

DRAINAGE AREA.--7,928 mi² (20,534 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to December 1895 (gage heights only), October 1896 to September 1899, October 1901 to October 1906, October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Whitewater" 1901-6.

REVISED RECORDS.--WSP 509: Drainage area at former site. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,628.12 ft (1,410.651 m), National Geodetic Vertical Datum of 1929. See WSP 1733 or 1924 for history of changes prior to October 1959.

REMARKS.--Records good. Records show flow that enters Colorado River from Gunnison River basin except for about 60 ft³/s (1.7 m³/s) diverted below gage during irrigation season. Natural flow of river affected by diversions for irrigation of about 233,000 acres (943 km²) above station, storage reservoirs, and return flow from irrigated lands.

AVERAGE DISCHARGE.--70 years (water years 1897-99, 1902-6, 1917-78), 2,519 ft³/s (71.34 m³/s), 1,825,000 acre-ft/yr (2,250 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,700 ft³/s (1,010 m³/s) May 23, 1920, gage height, 14.95 ft (4.557 m), site and datum then in use, from rating curve extended above 22,000 ft³/s (623 m³/s); minimum daily, 106 ft³/s (3.00 m³/s) July 20, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,550 ft³/s (242 m³/s) at 1500 May 17, gage height, 7.45 ft (2.274 m); minimum daily, 524 ft³/s (14.8 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	951	720	730	861	805	1630	3110	5130	4700	1170	923
2	546	992	709	671	845	824	2560	3040	5280	4020	836	989
3	546	974	698	683	817	856	1700	2950	5370	4060	801	1010
4	540	966	712	723	807	870	1510	3090	5250	3810	738	935
5	530	970	706	738	819	861	1430	3030	5000	3620	765	1030
6	524	979	682	741	832	890	1630	2980	4530	2820	777	1120
7	771	1010	664	735	858	879	1750	2990	4540	2200	761	1100
8	911	1020	668	628	872	848	1870	2960	4810	1680	749	1190
9	733	1030	672	591	867	821	2170	2820	4880	1400	720	1100
10	683	1020	665	651	844	792	2370	2640	5540	1560	756	1190
11	786	972	662	860	868	798	2030	2640	6400	1860	1160	1340
12	876	925	677	877	864	811	1860	2880	6420	1960	1150	1290
13	890	900	677	865	838	822	2160	3340	6340	1760	1030	1340
14	880	858	669	848	827	800	2300	4260	6900	1630	1060	1370
15	897	825	669	852	821	787	2260	5770	7080	1390	1080	1520
16	892	779	699	914	806	764	2390	7170	6960	1390	1050	1620
17	892	761	688	897	805	734	2450	7510	5590	1680	990	1520
18	890	746	672	873	769	734	2360	6910	5230	2210	1010	1370
19	883	741	676	866	778	736	2040	5890	5200	2840	995	1580
20	877	749	638	856	808	765	1950	5700	5100	3220	950	1560
21	876	745	628	860	801	765	2050	5800	4900	3090	955	1760
22	885	717	670	860	773	794	2220	6660	4840	2950	1040	1650
23	885	752	711	853	803	964	2070	6750	4750	2890	1010	1800
24	902	743	827	862	792	907	1930	6930	4700	2830	1010	1850
25	903	740	817	831	793	930	2110	6650	4840	2110	1050	1800
26	904	731	841	829	791	850	2480	6130	5040	1550	982	1770
27	911	727	802	858	800	814	3590	5800	4460	1430	1020	1850
28	912	736	714	857	820	844	3580	5490	4090	1350	1010	1900
29	906	730	721	826	---	955	3180	5040	4200	1340	951	1850
30	913	711	738	825	---	1000	3240	5150	5150	1370	934	1700
31	935	---	744	838	---	1100	---	5180	---	1390	944	---
TOTAL	25020	25500	21836	24898	22979	26120	66870	147260	158520	72110	29554	43127
MEAN	807	850	704	803	821	843	2229	4750	5284	2326	953	1438
MAX	935	1030	841	914	872	1100	3590	7510	7080	4700	1170	1900
MIN	524	711	628	591	769	734	1430	2640	4090	1340	720	923
AC-FT	49630	50580	43310	49390	45580	51810	132600	292100	314400	143000	58620	85540

CAL YR 1977 TOTAL 302785 MEAN 830 MAX 2120 MIN 443 AC-FT 600600
WTR YR 1978 TOTAL 663794 MEAN 1819 MAX 7510 MIN 524 AC-FT 1317000

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued
(Irrigation network station)
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1931 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1935 to September 1974, September 1975 to current year.
WATER TEMPERATURES: April 1949 to September 1974, September 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1975.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 micromhos on several days during July and September 1974; minimum, 280 micromhos May 23, 1948.
WATER TEMPERATURES: Maximum, 30.0°C Aug. 13, 1958; minimum, freezing point on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,820 micromhos Oct. 5; minimum, 336 micromhos May 25.
WATER TEMPERATURES: Maximum, 28.5°C Aug. 7; minimum, 0.0°C many days during December to February.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT										
18...	1230	1060	1520	8.1	13.0	50	9.0	--	40	730
NOV										
30...	1200	830	1480	8.3	5.5	25	10.2	<1	<1	650
DEC										
08...	1030	680	1510	8.5	2.0	--	--	--	--	630
15...	1200	750	1450	8.2	3.5	15	10.6	<1	K180	620
JAN										
13...	1215	860	1160	8.1	4.0	20	10.4	<1	460	490
FEB										
23...	1430	800	1075	8.3	6.5	20	11.3	<1	46	450
MAR										
21...	1415	752	1000	8.4	14.0	70	9.2	<1	42	450
APR										
13...	1215	2130	640	8.1	12.0	230	8.6	120	980	260
MAY										
31...	1100	6000	460	8.2	12.0	130	8.6	20	420	200
JUN										
21...	1200	4880	450	8.0	16.5	160	7.9	<1	>2000	190
JUL										
27...	1300	1420	990	8.4	23.0	28	7.9	60	K260	440
AUG										
29...	1315	921	1100	8.3	21.0	8.5	8.3	39	20	540

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT										
18...	550	190	61	130	2.1	4.7	220	0	180	740
NOV										
30...	460	160	60	110	1.9	5.0	230	0	190	680
DEC										
08...	450	150	62	110	1.9	4.7	220	0	180	610
15...	430	150	59	110	1.9	4.7	230	0	190	610
JAN										
13...	330	120	45	86	1.7	4.0	190	0	160	490
FEB										
23...	300	110	43	81	1.7	3.9	190	0	160	420
MAR										
21...	290	110	42	78	1.6	4.0	190	1	160	410
APR										
13...	140	64	24	42	1.1	3.5	140	0	110	200
MAY										
31...	120	54	17	27	.8	2.2	--	--	80	180
JUN										
21...	98	50	15	24	.8	2.0	--	--	89	140
JUL										
27...	300	120	33	61	1.3	3.6	--	--	140	390
AUG										
29...	420	140	46	75	1.4	4.3	--	--	120	560

K BASED ON NON-IDEAL COLONY COUNT.

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT										
18...	15	.7	14	1350	1260	1.84	3860	1.8	--	.00
NOV										
30...	14	.6	13	1200	1160	1.63	2690	1.9	--	.06
DEC										
08...	16	.6	13	--	1080	1.47	1980	--	1.8	--
15...	21	.6	13	1150	1080	1.56	2330	1.9	--	.12
JAN										
13...	14	.4	15	892	868	1.21	2070	1.4	--	.01
FEB										
23...	10	.4	11	824	773	1.12	1780	1.0	--	.01
MAR										
21...	13	.4	10	788	762	1.07	1600	.92	--	.01
APR										
13...	7.5	.3	11	445	422	.61	2560	.63	--	.06
MAY										
31...	3.9	.3	11	331	344	.45	5360	.43	--	.01
JUN										
21...	3.7	.2	5.9	297	294	.40	3910	.54	--	.04
JUL										
27...	8.4	.5	14	775	715	1.05	2970	1.2	--	.00
AUG										
29...	17	.6	13	1030	928	1.40	2560	1.4	--	.02

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT										
18...	--	--	.31	--	.09	.00	--	--	4.7	--
NOV										
30...	--	--	.38	--	.00	.00	--	3.4	--	--
DEC										
08...	--	--	--	--	--	--	.00	--	--	--
15...	--	--	.38	--	.03	.01	--	3.3	--	--
JAN										
13...	--	--	.47	--	.05	.02	--	--	3.0	.9
FEB										
23...	.23	.24	.17	1.2	.05	.01	--	3.0	--	--
MAR										
21...	.47	.48	.09	1.4	.20	.13	--	5.0	--	--
APR										
13...	1.0	1.1	.24	1.7	.39	.01	--	--	5.2	>5.0
MAY										
31...	--	--	.30	--	.02	.00	--	9.3	--	--
JUN										
21...	.78	.82	.31	1.4	.29	.02	--	6.7	--	--
JUL										
27...	.47	.47	.41	1.7	.06	.01	--	--	4.0	.6
AUG										
29...	.59	.61	.52	2.0	.03	.01	--	4.3	--	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
OCT										
18...	1230	3	2	700	0	10	0	0	10	50
JAN										
13...	1215	2	2	0	0	0	1	0	0	1
APR										
13...	1215	--	7	100	100	0	1	10	0	6
JUL										
27...	1300	3	3	200	50	3	1	20	10	0

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
18...	0	<10	2	1100	60	100	0	40	40
JAN									
13...	0	11	1	990	30	5	0	70	20
APR									
13...	2	15	0	8800	50	16	9	260	20
JUL									
27...	0	19	7	920	<10	16	5	40	9

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	PHENOLS (UG/L)
OCT									
18...	.0	.0	10	10	<10	0	10	10	--
JAN									
13...	.0	.0	15	0	0	0	30	0	--
APR									
13...	--	.0	--	0	0	0	50	10	--
JUL									
27...	.2	.0	8	7	0	0	40	<3	0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1600	1490	1340	1040	979	685	960	465	647	736	1050
2	1390	1560	1490	1330	1050	981	649	896	475	668	853	1050
3	1540	1520	1510	1270	1050	986	659	856	473	691	949	1060
4	1620	1550	1530	1210	1040	991	664	840	471	709	1040	1060
5	1790	1570	1540	1250	1040	988	682	826	467	726	1100	1040
6	1790	1590	1460	1240	1060	961	718	807	475	748	1150	1030
7	1660	1590	1400	1280	1070	998	748	797	481	771	1190	1030
8	1650	1590	1400	1290	1090	973	727	789	479	794	1230	1040
9	1630	1580	1410	1360	1100	947	703	739	482	822	1260	1050
10	1600	1550	1410	1280	1120	957	674	685	474	853	1040	1110
11	1600	1540	1410	1160	1070	979	664	647	452	898	899	1100
12	1590	1550	1430	1040	1110	983	667	614	432	933	814	1110
13	1580	1560	1430	1100	1150	977	643	583	406	964	805	1120
14	1570	1550	1440	1150	1130	992	620	553	370	996	900	1100
15	1550	1550	1450	1100	1100	1000	665	525	375	1010	915	1040
16	1540	1550	1490	1170	1090	994	687	502	376	1030	930	1010
17	1530	1540	1480	1210	1090	999	703	471	380	1040	940	1020
18	1520	1540	1470	1190	1080	1010	704	434	392	1030	955	1030
19	1530	1540	1480	1150	1040	1000	685	400	407	1020	970	1070
20	1540	1540	1530	1130	1070	1000	684	443	418	1010	980	1080
21	1550	1550	1460	1120	1090	1000	701	471	420	1000	990	1080
22	1560	1520	1390	1100	1060	1000	716	493	431	990	1010	1050
23	1570	1530	1380	1070	1060	990	713	516	439	980	1020	1070
24	1580	1520	1420	1070	1040	973	705	524	456	970	1030	1080
25	1600	1500	1420	1100	1030	922	717	437	494	960	1050	1110
26	1610	1500	1400	1070	1020	882	735	374	529	950	1060	1130
27	1620	1480	1340	1080	1010	877	756	401	560	950	1070	1050
28	1630	1490	1330	1090	992	868	817	421	587	667	1090	1030
29	1640	1480	1260	1060	---	831	898	442	610	586	1100	1030
30	1650	1480	1270	1040	---	779	977	456	626	582	1080	1110
31	1660	---	1320	1040	---	750	---	460	---	638	1060	---

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	6.5	8.0	6.0	4.0	3.0	3.0	1.0	4.0	1.5	7.0	6.0
2	11.5	3.5	7.5	5.5	4.5	2.5	1.0	.0	4.0	1.5	8.0	6.5
3	11.0	8.0	8.0	6.0	5.5	4.0	1.0	.0	3.5	1.5	7.5	7.0
4	13.5	8.5	9.0	6.5	6.5	5.5	.5	.0	3.5	1.5	7.5	6.0
5	15.0	9.5	10.0	7.5	6.5	4.5	3.0	.0	3.0	2.0	8.0	6.5
6	9.5	9.0	9.0	8.5	4.5	3.0	3.0	1.5	3.5	2.0	8.0	7.0
7	13.0	10.0	10.0	8.5	3.0	1.5	3.5	1.5	4.5	3.0	9.0	6.0
8	---	---	8.5	5.5	3.0	1.0	3.5	1.0	5.0	4.0	9.0	6.5
9	---	---	5.0	3.5	3.0	.5	2.5	.0	4.0	3.0	9.5	7.0
10	---	---	5.0	2.5	2.5	.5	2.5	.5	5.0	2.0	9.0	7.0
11	---	---	5.0	3.0	3.0	1.0	2.0	---	4.0	---	8.5	7.0
12	---	---	6.0	3.5	3.0	2.5	---	---	5.0	---	8.0	7.0
13	---	---	[illegible]	4.5	3.0	1.0	4.5	---	4.5	1.5	8.5	6.5
14	---	---	[illegible]	4.5	3.0	1.5	3.0	.5	5.5	3.5	7.0	5.5
15	---	---	7.0	5.0	3.0	2.0	---	---	4.5	3.0	7.5	4.5
16	---	---	7.0	5.0	3.0	1.5	4.5	---	5.0	2.5	7.5	4.0
17	---	---	6.5	5.0	1.5	.0	4.5	---	3.0	1.5	9.0	5.0
18	---	---	7.0	5.5	.5	.0	5.5	.0	3.0	.0	9.5	6.5
19	---	---	6.0	4.5	.0	.0	4.0	.0	3.5	.5	9.5	8.0
20	---	---	4.5	2.5	1.0	.0	4.0	.0	4.5	2.0	12.0	8.5
21	---	---	2.5	1.5	.5	.0	4.5	.0	6.0	2.5	13.5	9.0
22	---	---	3.5	2.0	.0	.0	3.5	.0	6.0	3.0	12.0	10.0
23	---	---	5.0	3.0	.0	.0	3.5	.0	6.5	3.5	11.0	9.0
24	---	---	4.5	3.5	.5	.0	3.0	.0	7.0	3.5	11.5	9.0
25	---	---	6.5	4.5	.5	.0	2.0	.0	6.5	4.0	12.0	8.5
26	---	---	7.0	5.0	.5	.0	1.5	.0	6.5	4.5	12.5	8.5
27	---	---	6.0	5.0	---	---	3.0	.0	7.0	5.5	13.5	9.5
28	---	---	6.0	4.5	.5	.0	3.0	.5	8.0	5.0	15.5	11.0
29	---	---	5.5	4.0	.5	.0	3.0	1.0	---	---	15.5	12.0
30	---	---	5.5	4.0	3.0	.0	2.5	.5	---	---	14.0	11.0
31	9.5	8.0	---	---	4.0	1.5	2.0	1.0	---	---	15.5	11.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	10.0	10.0	10.0	14.5	13.0	19.0	16.0	25.0	21.5	23.5	20.5
2	10.0	9.0	10.0	10.0	14.5	12.5	19.0	16.5	26.0	22.0	23.5	21.0
3	10.5	8.5	10.5	10.0	14.5	12.0	18.5	16.5	27.5	23.0	24.0	21.5
4	11.5	9.0	11.0	10.5	15.0	12.5	18.5	16.5	27.0	23.0	24.5	21.5
5	12.0	9.5	10.5	9.5	13.0	11.5	18.5	16.5	27.0	22.5	24.5	21.5
6	13.0	9.5	9.5	9.0	15.0	11.0	19.5	16.5	27.5	22.5	23.5	21.0
7	13.0	10.0	9.5	9.0	16.5	13.5	20.5	17.0	28.5	22.5	23.0	20.0
8	12.0	10.5	9.5	9.5	16.5	14.0	22.0	18.0	28.0	23.0	20.5	18.5
9	10.5	9.0	10.0	9.5	17.0	14.5	21.0	19.0	27.5	23.0	20.5	17.5
10	9.5	8.5	11.0	10.0	17.0	15.0	21.5	19.0	28.0	22.5	20.5	18.5
11	11.0	9.0	12.0	11.5	16.0	14.0	21.0	18.5	26.5	23.0	19.0	17.0
12	12.0	10.0	12.0	12.0	15.5	13.5	22.5	19.0	24.0	22.0	17.5	15.0
13	13.0	11.0	12.0	12.0	16.0	13.5	23.5	19.0	23.5	21.5	18.0	14.0
14	12.0	10.0	12.5	12.0	16.0	14.0	25.0	20.5	---	---	16.5	14.0
15	12.0	10.5	13.0	12.5	16.5	14.5	24.0	22.0	---	---	19.0	14.5
16	11.5	10.5	13.0	11.5	16.0	14.5	23.0	21.0	---	---	20.0	17.0
17	10.5	8.5	11.5	9.0	15.5	14.0	---	---	---	---	20.5	18.0
18	9.0	8.0	10.0	8.5	16.0	13.5	---	---	---	---	19.0	17.0
19	9.5	8.0	12.5	10.0	17.0	14.0	---	---	---	---	16.5	13.5
20	10.5	9.0	12.5	10.5	17.5	15.0	---	---	---	---	14.5	11.5
21	10.5	9.5	11.5	10.5	18.0	15.0	---	---	---	---	15.0	11.0
22	10.5	9.5	11.5	10.0	18.0	16.0	---	---	---	---	16.5	12.0
23	10.0	8.5	13.5	12.0	18.0	16.0	---	---	---	---	18.5	14.0
24	11.0	9.5	12.5	11.5	18.5	16.0	---	---	---	---	19.5	16.0
25	11.5	10.5	12.0	10.5	19.0	16.5	---	---	---	---	17.5	14.0
26	11.5	10.5	13.0	9.5	18.0	16.0	---	---	---	---	18.0	14.0
27	11.5	11.0	12.5	11.0	18.5	16.0	---	---	---	---	18.0	14.5
28	11.0	10.5	13.0	10.5	18.0	16.5	26.5	22.5	---	---	18.0	14.5
29	10.5	10.5	14.0	12.0	17.0	15.0	27.5	23.5	---	---	18.0	15.0
30	10.5	10.0	13.5	12.5	17.0	15.0	27.5	23.0	23.0	19.5	17.5	14.5
31	---	---	---	---	---	---	25.5	22.0	22.5	20.0	---	---

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	MED MAT. FALL DIAM. % FINER THAN .062 MM	MED MAT. FALL DIAM. % FINER THAN .125 MM
NOV 30...	1330	830	89	199	--	--	--
DEC 15...	1300	750	60	121	--	--	--
JAN 13...	1330	860	99	230	90	--	--
FEB 23...	1600	824	131	291	--	--	--
MAR 21...	1500	752	135	274	--	--	--
APR 13...	1330	2130	1070	6150	--	--	--
MAY 31...	1150	6000	668	10800	--	--	--
JUN 21...	1335	4880	554	7300	--	--	--
JUL 27...	1255	1420	85	326	--	22	84
AUG 29...	1330	914	71	175	--	--	--

09152600 ORCHARD MESA DRAIN AT GRAND JUNCTION, CO

LOCATION.--Lat 39°02'49", long 108°34'17", in NE¼NE¼ sec.27, T.1 S., R.1 W., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 350 ft (110 m) upstream from mouth and 1.6 mi (2.6 km) south of city hall in Grand Junction.

DRAINAGE AREA.--3.70 mi² (9.58 km²).

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,565 ft (1,391 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Orchard Mesa Canal inports water from the Colorado River into basin above station for irrigation. Flow is mostly waste water from canal and return flow from land irrigated under the canal. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years, 7.94 ft³/s (0.2249 m³/s), 5,750 acre-ft/yr (7.09 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42 ft³/s (1.19 m³/s) Aug. 8, 1977, gage height, 4.94 ft (1.506 m); maximum gage height, 4.95 ft (1.509 m) May 6, 1973; minimum daily discharge, 0.48 ft³/s (0.014 m³/s) Apr. 2, 3, 5, 6, 1976, Mar. 18, 20, 1977, Apr. 8, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26 ft³/s (0.74 m³/s) at 1800 Sept. 7, gage height, 4.65 ft (1.417 m); minimum daily, 0.48 ft³/s (0.014 m³/s) Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	4.5	1.8	1.5	1.0	1.0	.88	11	14	15	8.1	16
2	14	4.6	1.9	1.8	.94	1.0	.75	11	15	15	8.8	15
3	15	4.4	1.8	1.5	.90	1.0	1.0	12	15	15	7.6	11
4	16	4.1	1.8	1.2	.90	.90	1.2	13	15	15	7.5	9.5
5	16	3.9	1.7	1.4	.94	.97	.60	14	18	14	8.5	12
6	14	4.5	1.6	1.2	1.2	1.1	.50	15	17	13	9.0	13
7	14	3.4	1.7	.94	1.1	.87	.49	12	17	12	8.8	16
8	6.1	2.7	1.8	.95	1.1	.88	.48	13	14	8.7	8.4	7.6
9	14	2.7	1.5	1.0	1.1	.80	2.4	13	14	8.9	10	3.3
10	10	2.6	1.5	1.1	1.2	.87	.97	15	11	9.3	8.5	2.7
11	14	2.6	1.5	1.0	1.5	1.9	1.3	13	9.7	9.8	8.7	2.6
12	14	2.6	1.5	.96	1.2	1.8	1.1	13	7.6	11	11	12
13	14	2.5	1.4	.92	1.1	1.3	1.2	14	5.6	7.5	12	14
14	14	2.4	1,4	1.1	1.0	.86	4.5	15	5.8	8.0	15	12
15	14	2.4	1.6	1.2	1.0	.72	5.4	14	8.0	11	15	14
16	14	2.3	1.4	1.1	1.1	.81	5.7	12	7.9	10	14	14
17	15	2.4	1.2	1.1	.96	.81	7.3	14	6.1	12	13	15
18	16	2.6	1.4	1.0	.90	.83	1.2	12	7.2	13	13	13
19	17	2.4	1.1	1.0	.88	.92	.61	12	8.2	14	12	15
20	18	2.1	1.0	1.1	.99	.85	8.0	13	11	14	12	18
21	18	2.0	1.0	1.0	.89	.85	9.6	14	8.9	12	12	15
22	8.0	2.1	1.0	1.0	.84	1.0	9.3	16	8.7	13	14	15
23	4.9	2.0	1.1	.97	.88	.86	8.5	15	9.9	14	9.2	14
24	4.5	2.0	1.2	.90	.92	.79	10	13	9.4	13	12	13
25	4.5	2.0	1.2	.84	.88	.71	11	13	9.8	11	14	13
26	4.5	2.1	1.1	.94	.88	.76	12	13	8.7	9.2	14	13
27	4.5	2.2	1.1	.97	1.1	.83	11	14	8.9	6.8	15	14
28	4.4	1.9	1.1	.97	1.1	.78	11	15	10	6.2	15	16
29	4.6	1.8	1.1	.92	---	.70	12	13	13	5.3	17	15
30	4.6	1.9	1.1	.92	---	.67	11	11	15	5.8	18	16
31	4.5	---	1.3	.90	---	.71	---	12	---	6.8	17	---
TOTAL	349.1	81.7	42.9	33.40	28.50	28.85	150.98	410	329.4	339.3	368.1	379.7
MEAN	11.3	2.72	1.38	1.08	1.02	.93	5.03	13.2	11.0	10.9	11.9	12.7
MAX	18	4.6	1.9	1.8	1.5	1.9	12	16	18	15	18	18
MIN	4.4	1.8	1.0	.84	.84	.67	.48	11	5.6	5.3	7.5	2.6
AC-FT	692	162	85	66	57	57	299	813	653	673	730	753

CAL YR 1977 TOTAL 2725.25 MEAN 7.47 MAX 26 MIN .48 AC-FT 5410
WTR YR 1978 TOTAL 2541.93 MEAN 6.96 MAX 18 MIN .48 AC-FT 5040

09152650 LEACH CREEK AT DURHAM, CO

LOCATION.--Lat 39°05'27", long 108°36'25", in NW¼NW¼ sec.9, T.1 S., R.1 W., Ute Meridian, Mesa County, Hydrologic Unit 1401005, on left bank 40 ft (12 m) downstream from culvert on U.S. Highways 6 and 50, 3.5 mi (5.6 km) northwest of Durham, and 2.9 mi (4.7 km) northwest of city hall in Grand Junction.

DRAINAGE AREA.--24.8 mi^2 (64.2 km^2).

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,540 ft (1,384 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Flow is mostly return flow and waste water from lands irrigated under the Government Highline and Grand Valley Canals. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years, 31.5 ft^3/s (0.892 m^3/s), 22,820 acre-ft/yr (28.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 632 ft^3/s (17.9 m^3/s) July 18, 1974, gage height, 6.76 ft (2.060 m); minimum daily, 4.4 ft^3/s (0.12 m^3/s) Mar. 30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 390 ft^3/s (11.0 m^3/s) at 0630 Oct. 7, gage height, 5.20 ft (1.585 m), from maximum stage indicator; minimum daily, 5.8 ft^3/s (0.16 ft^3/s) Mar. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	47	9.8	7.2	7.1	7.3	6.8	35	33	30	37	41
2	32	20	9.7	7.2	7.1	7.2	6.4	42	33	28	36	41
3	36	14	9.7	7.3	7.0	7.1	6.1	38	33	29	38	42
4	34	13	9.7	7.5	6.9	6.5	6.4	39	36	32	38	41
5	34	13	23	7.4	7.0	6.8	6.4	41	37	35	41	40
6	38	15	64	7.6	7.5	7.1	6.3	43	32	34	42	37
7	68	13	21	7.2	8.0	6.2	6.2	41	29	35	38	56
8	45	12	14	7.1	8.1	6.2	6.2	41	30	36	36	42
9	40	12	17	7.3	7.4	6.2	10	41	32	37	32	41
10	39	11	17	7.5	7.5	6.4	19	42	31	40	33	41
11	34	11	18	7.7	9.0	6.6	62	37	30	43	36	40
12	34	11	17	7.5	7.6	6.6	29	34	30	40	37	40
13	35	11	16	7.3	7.2	7.3	13	32	31	36	42	40
14	34	11	15	7.3	7.2	7.1	14	31	33	34	43	40
15	34	11	17	7.8	7.2	6.1	15	29	30	35	43	40
16	31	11	15	7.7	7.1	5.8	26	31	32	37	42	40
17	30	11	13	7.5	6.8	5.8	29	35	31	40	42	40
18	32	11	9.9	7.3	6.6	6.0	30	41	34	40	40	40
19	32	12	8.5	7.2	6.7	6.0	27	39	34	39	40	40
20	31	11	7.5	7.3	6.7	6.1	26	32	36	38	40	40
21	30	10	8.0	7.2	6.6	6.0	24	33	36	35	38	40
22	30	11	7.7	7.0	6.6	6.4	22	32	36	34	38	40
23	29	10	7.7	7.7	6.6	6.2	22	28	35	33	38	40
24	28	10	7.5	7.9	6.6	6.2	20	29	37	34	39	40
25	28	10	7.5	7.1	6.6	6.1	17	31	37	35	37	40
26	26	10	7.4	7.1	6.7	6.2	24	30	36	34	38	40
27	28	10	7.5	7.1	6.7	6.2	28	31	35	35	40	40
28	29	10	7.5	7.1	6.9	6.2	27	36	33	36	42	40
29	30	9.8	7.7	7.1	---	6.1	34	35	33	36	41	40
30	30	10	7.8	7.0	---	6.1	35	33	31	37	38	40
31	31	---	7.8	7.1	---	6.2	---	31	---	37	40	---
TOTAL	1044	381.8	415.9	227.3	199.0	198.3	603.8	1093	996	1104	1205	1222
MEAN	33.7	12.7	13.4	7.33	7.11	6.40	20.1	35.3	33.2	35.6	38.9	40.7
MAX	68	47	64	7.9	9.0	7.3	62	43	37	43	43	56
MIN	26	9.8	7.4	7.0	6.6	5.8	6.1	28	29	28	32	37
AC-FT	2070	757	825	451	395	393	1200	2170	1980	2190	2390	2420

CAL YR 1977 TOTAL 9946.9 MEAN 27.3 MAX 151 MIN 4.5 AC-FT 19730
WTR YR 1978 TOTAL 8690.1 MEAN 23.8 MAX 68 MIN 5.8 AC-FT 17240

09152900 ADOBE CREEK NEAR FRUITA, CO

LOCATION.--Lat 39°08'13", long 108°41'48", in SW¼SW¼ sec.22, T.1 N., R.2 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 30 ft (9 m) downstream from bridge on U.S. Highways 6 and 50, 0.8 mi (1.3 km) upstream from mouth, and 2.4 mi (3.9 km) southeast of Fruita.

DRAINAGE AREA.--15.4 mi² (39.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

REVISED RECORDS.--WDR CO-77-2: 1973-76(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,520 ft (1,378 m), from topographic map.

REMARKS.--Records good. Flow is mostly return flow and waste water from lands irrigated under the Government Highline and Grand Valley Canals.

AVERAGE DISCHARGE.--5 years, 21.0 ft³/s (0.595 m³/s), 15,210 acre-ft/yr (18.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173 ft³/s (4.90 m³/s) July 4, 1977, gage height, 5.68 ft (1.731 m), from rating curve extended above 95 ft³/s (2.7 m³/s); minimum daily, 1.3 ft³/s (0.037 m³/s) Apr. 2, 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft³/s (3.91 m³/s) at 0030 Oct. 7, gage height, 5.05 ft (1.539 m), from rating curve extended above 95 ft³/s (2.7 m³/s); minimum daily, 1.6 ft³/s (0.045 m³/s) Feb. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	18	3.5	2.5	1.8	2.1	2.1	41	42	38	32	42
2	44	7.6	3.4	2.5	1.7	2.2	2.1	38	40	39	34	43
3	42	5.8	3.4	2.5	1.6	2.3	1.8	33	40	40	33	43
4	40	5.3	3.5	2.5	1.7	2.1	1.8	28	38	45	35	48
5	38	5.1	3.2	2.4	1.7	2.3	1.8	29	38	41	39	50
6	39	12	3.3	2.4	1.8	2.3	1.8	31	32	39	38	48
7	48	6.4	3.3	2.3	1.9	2.1	1.8	33	34	40	34	51
8	32	5.3	4.5	2.3	2.1	1.8	1.8	38	35	36	36	52
9	32	4.6	8.9	2.3	1.8	1.9	2.1	43	35	38	33	44
10	28	4.3	10	2.2	1.9	1.9	1.8	39	39	48	33	40
11	26	4.4	9.7	2.2	2.1	1.9	1.8	32	35	48	32	38
12	27	4.4	9.9	2.2	2.1	2.1	1.8	32	36	49	36	35
13	28	4.4	9.7	2.2	1.9	1.9	4.3	30	35	52	39	38
14	31	4.3	9.8	2.2	1.8	1.9	9.2	26	33	45	45	38
15	33	4.2	10	2.4	1.9	1.9	9.4	28	36	49	47	39
16	37	4.1	9.7	2.3	1.8	1.9	11	32	38	50	44	36
17	37	4.1	3.7	2.3	1.8	1.8	16	39	40	51	40	34
18	38	4.1	2.8	2.3	1.7	1.9	22	37	38	42	41	35
19	35	4.2	2.8	2.2	1.8	1.9	23	36	37	38	48	38
20	34	4.0	2.6	2.3	1.8	1.9	21	33	35	35	50	36
21	33	3.9	2.5	2.2	1.7	1.9	24	33	36	34	50	37
22	32	4.1	2.5	2.2	1.7	1.9	29	32	40	39	50	37
23	30	4.1	2.4	2.2	1.7	1.8	32	34	45	37	42	39
24	27	3.8	2.4	2.3	1.8	1.7	35	42	44	35	46	42
25	20	3.9	2.4	2.1	1.9	1.7	37	47	38	36	47	44
26	19	4.1	2.4	2.2	1.9	1.7	42	48	36	34	48	41
27	20	4.1	2.5	2.2	1.9	1.8	40	40	29	33	46	41
28	19	3.8	2.6	2.1	2.1	1.8	48	38	33	41	42	39
29	19	3.6	2.7	2.1	---	1.8	46	38	36	34	38	40
30	18	3.6	2.7	1.8	---	1.8	42	36	37	32	35	39
31	19	---	2.7	1.8	---	1.9	---	40	---	32	38	---
TOTAL	969	155.6	145.5	69.7	51.4	59.9	513.4	1106	1110	1250	1251	1227
MEAN	31.3	5.19	4.69	2.25	1.84	1.93	17.1	35.7	37.0	40.3	40.4	40.9
MAX	48	18	10	2.5	2.1	2.3	48	48	45	52	50	52
MIN	18	3.6	2.4	1.8	1.6	1.7	1.8	26	29	32	32	34
AC-FT	1920	309	289	138	102	119	1020	2190	2200	2480	2480	2430

CAL YR 1977 TOTAL 7693.5 MEAN 21.1 MAX 52 MIN 1.5 AC-FT 15260
WTR YR 1978 TOTAL 7908.5 MEAN 21.7 MAX 52 MIN 1.6 AC-FT 15690

09152900 ADOBE CREEK NEAR FRUITA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to current year.
WATER TEMPERATURES: April 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,530 micromhos Apr. 10, 1973; minimum, 750 micromhos Mar. 4, 5, 1974.
WATER TEMPERATURES: Maximum, 33.0°C Apr. 11, 1973; minimum, 0.5°C on several days during November 1975 to January 1976, and Jan. 25, 26, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 4,980 micromhos Nov. 6; minimum, 844 micromhos June 23.
WATER TEMPERATURES: Maximum, 26.0°C Aug. 2; minimum, 0.5°C Jan. 25, 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT									
18...	1120	44	1750	8.3	10.5	9.0	610	430	160
FEB									
14...	1335	2.0	4200	8.2	6.5	12.8	2000	1600	420
APR									
03...	0815	2.1	4700	7.4	10.5	8.4	2100	1800	460
JUL									
10...	0820	52	1070	7.4	18.5	7.3	430	300	120

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT									
18...	52	170	3.0	5.3	220	0	180	530	200
FEB									
14...	220	470	4.6	9.9	420	0	340	2100	260
APR									
03...	230	440	4.2	8.4	390	0	320	2200	250
JUL									
10...	31	86	1.8	3.4	150	0	120	340	79

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT									
18...	.4	7.7	1240	1.69	147	1.7	.01	20	40
FEB									
14...	.3	9.8	3740	5.09	20.2	10	.27	20	310
APR									
03...	.2	9.3	3840	5.22	21.8	10	.01	110	380
JUL									
10...	.2	9.0	749	1.02	105	1.5	.07	30	30

09152900 ADOBE CREEK NEAR FRUITA, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	2820	3960	4260	4420	4330	4510	1090	1030	1070	1590	1410
2	1720	4360	3950	4270	4390	4270	4500	1090	1040	1050	1690	1450
3	1770	4820	3940	4300	4370	4250	4510	1100	1060	1050	1700	1470
4	1860	4870	3940	4270	4360	4390	4540	1110	1070	1030	1630	1450
5	1900	4930	3930	4300	4330	4370	4510	1120	1090	1040	1630	1450
6	1940	4590	3920	4310	4310	4360	4490	1120	1130	1070	1620	1450
7	1980	3340	3910	4330	4300	4460	4520	1130	1180	1080	1620	1490
8	2020	3520	3910	4350	4320	4400	4550	1140	1160	1100	1610	1570
9	2010	3620	2530	4370	4330	4390	4490	1150	1190	1120	1610	1560
10	2000	3710	2430	4420	4320	4350	4430	1150	1160	1250	1610	1600
11	2030	3800	2490	4440	4250	4320	4500	1160	1180	1240	1600	1620
12	2010	3900	2540	4470	4260	4320	4530	1170	1060	1200	1600	1670
13	2060	3970	2610	4490	4320	4350	3300	1180	971	1130	1590	1650
14	2120	4030	2640	4530	4370	4390	1870	1180	1050	1160	1590	1660
15	2110	4090	2710	4500	4360	4390	1890	1190	1030	1110	1590	1650
16	2070	4080	2770	4560	4350	4400	1530	1200	1030	1050	1580	1670
17	2110	4070	3620	4590	4330	4410	1530	1210	979	901	1580	1700
18	2070	4060	4070	4590	4300	4450	1270	1210	1000	956	1570	1700
19	2190	4060	4160	4560	4310	4480	1250	1220	1130	984	1570	1730
20	2190	4050	4210	4530	4320	4480	1170	1220	1140	994	1560	1750
21	1930	4040	4160	4530	4310	4510	1090	1330	1140	1050	1560	1740
22	1850	4030	4210	4530	4310	4520	1010	1240	981	1110	1560	1720
23	1890	4020	4220	4450	4320	4520	1060	1110	897	1170	1550	1680
24	1940	4010	4220	4320	4320	4550	1090	968	884	1220	1550	1570
25	2060	4000	4210	4490	4350	4540	1150	883	932	1280	1540	1480
26	2130	4000	4210	4440	4360	4550	1180	886	975	1340	1540	1470
27	2170	3990	4230	4430	4370	4550	1190	928	1070	1400	1570	1460
28	2220	3980	4240	4400	4310	4560	1150	980	1130	1460	1610	1480
29	2260	3970	4230	4380	---	4570	1070	1010	1090	1520	1550	1470
30	2310	3960	4260	4380	---	4570	1080	1040	1070	1570	1410	1480
31	2340	---	4210	4400	---	4560	---	1040	---	1630	1440	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	10.5	9.0	7.5	---	---	3.5	1.5	6.0	4.0	8.5	7.5
2	16.0	10.0	9.0	6.0	---	---	2.5	.5	5.5	3.0	9.0	8.0
3	17.0	10.5	9.5	6.5	---	---	4.5	2.5	5.5	3.5	9.0	8.0
4	17.5	12.0	10.5	7.0	---	---	5.0	3.5	5.5	3.0	9.0	7.0
5	18.5	14.0	11.5	8.0	---	---	6.0	4.0	5.5	3.5	9.5	8.0
6	15.5	14.0	11.0	9.0	---	---	6.0	5.0	6.0	4.5	9.0	8.0
7	16.5	12.5	11.0	9.0	---	---	5.0	4.0	6.5	5.5	10.0	6.5
8	15.0	10.0	9.5	6.5	5.5	3.0	4.5	3.5	6.5	5.0	10.0	6.5
9	15.0	10.0	6.5	4.0	4.5	1.5	5.0	2.5	5.0	3.5	9.5	6.5
10	13.5	9.5	7.0	4.0	4.5	1.5	5.5	4.5	6.5	5.0	9.0	7.5
11	13.0	8.5	7.5	4.5	4.0	1.5	6.5	5.5	7.0	5.5	9.5	7.0
12	12.5	7.5	8.5	6.0	5.0	2.5	6.0	5.5	6.0	4.5	9.0	7.5
13	12.5	10.0	8.0	5.5	4.5	2.0	6.5	5.0	6.0	3.5	9.0	6.5
14	13.5	8.0	8.0	5.5	5.0	2.5	5.0	3.5	7.0	5.0	8.0	6.5
15	14.5	8.5	---	---	5.5	2.5	6.0	5.0	6.0	4.0	8.5	4.5
16	14.0	9.0	---	---	5.0	3.0	6.5	5.0	6.0	4.0	9.0	4.5
17	14.5	9.0	---	---	4.5	2.0	7.0	5.5	5.0	2.5	10.0	5.5
18	14.5	9.0	---	---	5.0	4.0	6.5	6.0	4.0	1.0	11.0	6.5
19	14.0	9.0	---	---	4.0	2.0	6.0	5.0	5.0	1.5	10.5	8.0
20	13.5	10.5	---	---	2.5	1.0	6.5	5.0	6.0	3.5	14.5	9.5
21	14.5	11.5	---	---	1.5	1.0	6.5	5.5	6.5	3.0	14.5	9.0
22	14.5	10.0	---	---	3.0	1.5	6.0	5.0	6.5	3.0	12.0	10.0
23	14.0	9.5	---	---	3.5	1.5	5.5	3.0	7.0	3.0	13.0	9.0
24	13.0	9.0	---	---	3.5	1.5	3.5	2.0	7.0	3.0	13.5	10.0
25	13.0	8.5	---	---	3.5	1.5	2.0	.5	7.5	4.5	13.0	8.0
26	13.0	8.0	---	---	3.0	1.0	3.0	.5	8.5	6.0	13.5	8.0
27	13.0	8.5	---	---	4.5	2.5	5.0	3.0	9.5	7.0	15.0	9.0
28	13.0	9.0	---	---	6.0	4.5	4.0	2.5	9.5	6.5	16.0	10.5
29	12.5	9.5	---	---	6.0	5.0	4.0	2.0	---	---	16.0	10.0
30	12.5	9.5	---	---	7.0	5.5	3.5	2.0	---	---	15.5	10.5
31	9.5	8.0	---	---	6.0	3.5	4.0	1.5	---	---	16.5	12.0

09152900 ADOBE CREEK NEAR FRUITA, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	10.5	---	---	21.0	11.0	24.0	15.5	---	---	22.5	16.0
2	12.5	9.5	---	---	20.5	11.5	24.0	15.0	26.0	18.5	22.0	16.5
3	12.5	9.5	---	---	21.5	12.0	23.0	14.5	25.5	18.5	23.0	17.0
4	14.5	9.5	---	---	21.5	13.5	23.0	14.5	25.5	17.5	23.0	16.5
5	15.0	10.5	---	---	19.0	13.0	23.0	14.5	---	---	23.5	17.5
6	16.0	10.0	---	---	20.5	12.0	23.5	15.0	---	---	23.5	17.5
7	16.5	11.5	---	---	21.5	13.0	24.0	15.0	---	---	22.0	18.5
8	15.5	12.0	---	---	22.5	13.5	24.0	15.5	---	---	21.5	17.0
9	12.5	9.0	---	---	22.5	14.0	23.5	17.0	---	---	22.0	17.0
10	14.0	7.5	---	---	22.5	14.5	23.0	18.0	---	---	21.0	17.5
11	16.0	9.5	---	---	22.5	14.0	22.5	17.5	---	---	20.0	15.5
12	17.0	11.5	---	---	22.5	12.5	24.5	17.5	---	---	19.0	14.0
13	15.0	11.0	---	---	23.0	13.5	25.5	17.0	---	---	19.0	12.0
14	15.0	10.5	---	---	23.0	13.0	25.5	17.0	---	---	17.5	11.5
15	15.0	11.5	---	---	23.0	14.0	23.0	18.5	---	---	19.0	12.0
16	15.0	9.5	---	---	22.5	13.5	24.0	18.5	---	---	19.5	13.5
17	13.0	7.5	---	---	22.5	13.5	24.5	18.5	---	---	19.0	---
18	15.5	5.5	---	---	22.0	12.5	26.0	18.0	---	---	16.5	---
19	16.5	6.5	---	---	22.0	14.0	26.0	18.5	---	---	16.5	---
20	17.5	7.0	21.0	10.5	23.0	13.5	26.0	19.0	---	---	15.0	10.0
21	15.5	8.0	17.5	13.5	23.5	14.5	---	---	---	---	15.0	9.5
22	16.0	5.5	21.5	11.5	23.5	14.5	---	---	---	---	16.5	---
23	17.0	6.0	20.0	12.5	25.0	15.5	---	---	---	---	17.0	11.0
24	19.0	7.5	20.0	11.0	24.5	16.5	---	---	---	---	17.5	12.5
25	17.0	10.0	19.0	11.5	23.0	15.5	---	---	---	---	18.0	13.0
26	18.0	10.0	20.5	11.0	23.5	14.0	---	---	23.0	16.0	18.5	---
27	17.0	10.5	19.5	12.0	22.0	15.0	---	---	22.5	15.0	18.5	---
28	17.5	10.0	21.0	12.5	21.0	17.0	---	---	22.5	15.5	18.5	---
29	15.0	9.5	20.5	11.5	21.0	16.0	---	---	22.0	15.0	19.0	---
30	17.5	10.0	21.0	12.5	24.0	15.0	---	---	22.0	14.5	18.5	---
31	---	---	17.5	12.5	---	---	---	---	21.5	16.5	---	---

09153290 REED WASH NEAR MACK, CO

LOCATION.--Lat 39°12'41", long 108°48'11", in SE¼SW¼ sec.27, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 250 ft (76 m) upstream from unnamed tributary, 0.4 mi (0.6 km) downstream from Peck and Beede Wash, and 3.5 mi (5.6 km) east of Mack.

DRAINAGE AREA.--15.7 mi² (40.7 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,505 ft (1,373 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Flow is mostly return flow and waste water from irrigated lands under Government Highline and Grand Valley Canals. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 251 ft³/s (7.11 m³/s) July 21, 1977, gage height, 5.94 ft (1.811 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Mar. 30 to Apr. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 196 ft³/s (5.55 m³/s) at 2400 Oct. 6, gage height, 5.46 ft (1.664 m); minimum daily, 4.1 ft³/s (0.12 m³/s) Feb. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	62	9.3	5.8	4.9	4.3	6.0	75	97	74	85	105
2	83	20	9.3	5.7	4.9	4.6	5.5	86	92	72	81	103
3	79	12	9.3	5.7	4.7	4.9	4.8	82	105	76	81	105
4	79	12	9.3	5.4	4.5	4.3	4.4	82	100	78	88	105
5	79	12	9.5	5.4	4.5	4.9	4.4	90	100	78	84	105
6	85	18	9.3	5.4	4.8	4.9	4.3	91	106	77	88	104
7	94	13	32	5.4	4.9	5.7	4.4	93	116	71	88	108
8	87	11	67	5.4	5.1	6.0	4.7	96	126	72	100	116
9	101	11	63	5.4	4.5	6.3	5.1	95	138	63	86	112
10	94	9.9	63	5.4	4.6	6.3	5.1	95	135	67	82	118
11	84	9.9	62	5.4	5.0	4.9	5.7	90	132	91	90	121
12	84	9.9	56	5.3	4.7	4.6	20	79	119	90	100	103
13	84	9.4	46	4.9	4.7	4.4	46	79	105	89	94	100
14	81	9.3	40	4.9	4.7	4.3	49	81	104	97	98	101
15	81	9.1	38	5.4	4.6	4.3	52	84	105	99	100	114
16	93	9.0	45	5.7	4.6	4.3	49	86	105	100	105	104
17	84	9.0	18	5.7	4.6	4.4	50	86	84	92	105	119
18	82	9.3	8.1	5.7	4.6	5.2	46	97	96	94	100	120
19	80	9.4	7.5	5.7	4.3	6.3	40	98	98	89	105	115
20	81	8.7	6.8	5.7	4.3	5.7	41	99	76	93	105	123
21	81	8.6	6.9	5.4	4.3	5.7	51	100	75	88	105	123
22	81	8.9	7.1	5.2	4.3	6.3	57	82	75	81	102	124
23	80	8.8	7.1	5.3	4.3	6.3	68	90	78	72	102	124
24	55	8.6	6.7	5.4	4.3	6.8	53	95	75	78	97	124
25	54	8.8	6.6	5.4	4.3	7.3	63	98	72	71	105	124
26	55	9.2	6.6	5.2	4.1	8.2	75	100	72	76	106	124
27	59	9.6	6.3	5.2	4.3	8.2	70	100	74	90	102	124
28	61	9.1	6.3	5.0	4.3	7.4	74	105	70	77	103	124
29	63	9.0	6.3	4.9	---	6.9	77	107	72	71	97	125
30	69	9.0	6.3	4.9	---	6.7	75	105	74	71	90	125
31	68	---	6.3	4.9	---	6.4	---	100	---	79	99	---
TOTAL	2422	363.5	680.9	166.2	127.7	176.8	1110.4	2846	2876	2516	2985	3442
MEAN	78.1	12.1	22.0	5.36	4.56	5.70	37.0	91.8	95.9	81.2	96.3	115
MAX	101	62	67	5.8	5.1	8.2	77	107	138	100	106	125
MIN	54	8.6	6.3	4.9	4.1	4.3	4.3	75	70	63	81	100
AC-FT	4800	721	1350	330	253	351	2200	5650	5700	4990	5920	6830

CAL YR 1977 TOTAL 18359.5 MEAN 50.3 MAX 124 MIN 3.5 AC-FT 36420
WTR YR 1978 TOTAL 19712.5 MEAN 54.0 MAX 138 MIN 4.1 AC-FT 39100

09153300 REED WASH NEAR LOMA, CO

LOCATION.--Lat 39°11'01", long 108°47'12", in NE¼SW¼ sec.2, T.1 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 40 ft (12 m) upstream from bridge on U.S. Highways 6 and 50, 1.6 mi (2.6 km) upstream from mouth, and 1.7 mi (2.7 km) southeast of Loma.

DRAINAGE AREA.--29.3 mi² (75.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,470 ft (1,362 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Flow is mostly return flow and waste water from lands irrigated under the Government Highline and Grand Valley Canals.

AVERAGE DISCHARGE.--5 years, 92.9 ft³/s (2.631 m³/s), 67,310 acre-ft/yr (83.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 297 ft³/s (8.41 m³/s) July 21, 1973, gage height, 6.46 ft (1.975 m); minimum daily, 6.1 ft³/s (0.17 m³/s) Feb. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 266 ft³/s (7.53 m³/s) at 1300 Sept. 9, gage height, 5.56 ft (1.695 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Feb. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	128	18	13	9.9	11	10	129	178	157	165	182
2	173	52	18	13	9.9	11	9.7	145	160	155	167	184
3	178	34	17	13	9.7	13	9.7	139	192	160	155	189
4	181	31	17	13	9.7	10	9.7	145	179	130	164	197
5	170	30	16	13	9.5	11	9.7	157	188	138	150	199
6	170	40	16	14	10	11	9.5	165	201	142	160	193
7	189	33	31	13	10	10	9.7	170	208	140	190	202
8	177	28	113	12	10	10	9.3	170	206	140	170	212
9	185	27	108	12	9.7	10	9.7	171	195	140	150	242
10	194	26	110	12	9.9	11	9.5	167	176	143	150	220
11	187	26	108	12	10	11	9.3	160	170	176	160	230
12	182	26	107	12	9.7	12	36	123	183	181	180	210
13	182	26	108	12	9.3	11	93	141	172	174	170	190
14	173	25	95	12	9.3	11	105	140	170	180	170	190
15	164	25	93	12	9.3	11	100	143	149	180	185	210
16	166	24	95	12	9.5	11	100	147	178	165	180	205
17	170	24	52	12	9.1	11	100	149	142	148	185	210
18	168	24	18	12	9.1	11	95	168	160	140	180	220
19	170	24	16	11	9.3	11	88	178	166	155	185	206
20	167	22	15	12	9.5	11	90	162	127	140	190	206
21	164	21	15	12	9.3	11	94	166	158	160	190	207
22	165	20	15	12	9.5	12	95	175	157	180	185	205
23	163	20	15	11	9.5	12	115	164	161	145	180	202
24	127	20	14	11	9.7	11	102	171	156	140	165	206
25	127	20	14	11	9.7	11	112	175	149	145	168	206
26	130	20	14	11	9.7	11	126	178	150	160	185	199
27	137	20	14	11	10	10	121	183	151	170	184	194
28	138	19	14	11	10	11	120	184	150	160	188	201
29	139	18	14	10	---	10	126	191	151	150	179	195
30	140	18	13	10	---	10	126	189	156	150	175	191
31	134	---	13	10	---	10	---	179	---	165	173	---
TOTAL	5081	871	1326	367	269.8	338	2049.8	5024	5039	4809	5398	6103
MEAN	164	29.0	42.8	11.8	9.64	10.9	68.3	162	168	155	174	203
MAX	194	128	113	14	10	13	126	191	208	181	190	242
MIN	127	18	13	10	9.1	10	9.3	123	127	130	150	182
AC-FT	10080	1730	2630	728	535	670	4070	9970	9990	9540	10710	12110

CAL YR 1977 TOTAL 35653.6 MEAN 97.7 MAX 203 MIN 7.1 AC-FT 70720
WTR YR 1978 TOTAL 36675.6 MEAN 100 MAX 242 MIN 9.1 AC-FT 72750

09153300 REED WASH NEAR LOMA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to current year.
WATER TEMPERATURES: April 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 10,500 micromhos Jan. 21, 22, 1974; minimum, 815 micromhos Apr. 23, 1973.
WATER TEMPERATURES: Maximum, 28.0°C June 9, July 9, 10, 1973; minimum, freezing point on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 4,960 micromhos Mar. 31; minimum, 836 micromhos May 2.
WATER TEMPERATURES: Maximum, 24.0°C Aug. 11; minimum, 1.0°C Dec. 11, 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
18...	1210	160	1900	8.2	11.0	9.0	750	570	190
FEB									
14...	1250	9.3	4700	8.2	7.0	12.8	2500	2200	540
APR									
03...	1010	9.4	4900	8.0	10.5	9.4	2400	2200	500
JUL									
10...	1030	161	1600	8.1	20.5	7.3	730	570	180

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)
OCT									
18...	68	170	2.7	6.0	220	0	180	590	210
FEB									
14...	280	340	3.0	12	350	0	290	2500	260
APR									
03...	290	380	3.3	9.2	350	0	290	2500	250
JUL									
10...	68	110	1.8	4.5	190	0	160	650	100

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT									
18...	.3	8.8	1360	1.85	588	1.5	.01	20	20
FEB									
14...	.3	8.3	4150	5.64	104	9.2	.00	30	130
APR									
03...	.2	7.4	4150	5.64	105	8.6	.07	80	150
JUL									
10...	.3	9.0	1230	1.67	535	2.5	.04	40	20

09153300 REED WASH NEAR LOMA, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2020	4260	4540	4550	4660	4760	4850	1160	1270	1160	1630	1730
2	2120	4430	4550	4560	4590	4700	4810	864	1280	1150	1640	1730
3	2110	4600	4530	4570	4580	4540	4910	887	1280	1150	1650	1730
4	2020	4600	4530	4570	4540	4490	4830	883	1290	1140	1760	1740
5	2230	4590	4510	4560	4540	4500	4730	880	1280	1150	1750	1740
6	2070	4590	4350	4580	4500	4490	4560	882	1270	1230	1750	1740
7	2130	4600	3910	4520	4480	4150	4490	888	1250	1340	1750	1750
8	2090	4600	1990	4540	4400	4220	4500	890	1250	1440	1760	1760
9	2140	4590	2050	4610	4380	4260	4390	922	1220	1540	1760	1770
10	2030	4580	2170	4640	4360	4400	4240	983	1200	1600	1770	1780
11	2030	4570	2460	4620	4200	4430	4280	1040	1200	1600	1770	1780
12	2090	4560	2570	4640	4130	4430	3800	1090	1110	1500	1770	1790
13	2120	4550	2760	4650	4130	4470	2150	1220	1150	1550	1760	1800
14	2110	4540	3060	4680	4400	4490	1650	1170	1160	1560	1760	1800
15	2190	4530	3260	4670	4680	4350	1450	1250	1220	1560	1700	1810
16	1980	4680	3490	4660	4670	4330	1330	1200	1240	1570	1690	1820
17	1930	4760	3760	4650	4660	4340	1140	1150	1280	1570	1690	1830
18	1930	4780	4230	4630	4650	4530	980	1150	1360	1580	1670	1840
19	2130	4770	4690	4580	4680	4670	1010	1080	1360	1580	1670	1850
20	1900	4730	4700	4530	4640	4630	1040	1210	1380	1580	1690	1860
21	1990	4720	4680	4540	4560	4530	1070	1240	1350	1570	1700	1870
22	3010	4710	4660	4550	4730	4710	1090	1240	1380	1570	1720	1880
23	3310	4630	4660	4550	4750	4620	1100	1280	1380	1580	1700	1870
24	2900	4690	4500	4580	4270	4510	1160	1280	1390	1580	1710	1850
25	3080	4530	4310	4590	4420	4340	1160	1280	1140	1590	1700	1820
26	3250	4470	4600	4600	4390	4490	1160	1280	1150	1590	1700	1820
27	3410	4560	4610	4610	4670	4420	1170	1290	1150	1600	1710	1840
28	3590	4550	4620	4620	4620	4650	1210	1280	1170	1600	1710	1840
29	3750	4550	4590	4640	---	4580	1200	1280	1160	1610	1710	1860
30	3920	4550	4600	4650	---	4750	1230	1260	1150	1620	1720	1860
31	4090	---	4500	4660	---	4650	---	1260	---	1630	1720	---

09153300 REED WASH NEAR LOMA, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	---	---	---	6.0	4.5	---	2.5	6.5	5.0	9.5	8.0
2	15.0	---	---	---	7.5	5.5	3.5	1.5	---	4.0	10.0	8.0
3	15.5	---	---	---	8.0	6.0	5.0	3.5	---	4.5	9.0	8.0
4	16.0	---	---	---	9.0	7.5	5.5	4.5	---	4.0	10.5	7.5
5	17.0	---	---	---	8.5	6.0	6.5	5.0	6.0	4.5	10.5	8.0
6	16.0	14.5	---	---	6.5	4.5	7.0	5.5	6.5	5.0	10.5	8.0
7	16.0	---	---	---	6.0	3.0	6.0	4.5	7.0	6.5	11.5	7.0
8	14.5	---	---	---	4.0	2.5	5.5	4.5	---	5.5	15.5	6.5
9	13.5	---	---	---	3.0	1.5	5.5	3.5	6.0	4.5	14.5	7.0
10	13.0	---	---	---	3.5	2.0	6.0	5.0	8.0	6.0	9.5	7.5
11	12.5	---	---	---	3.5	1.0	7.0	6.0	7.5	6.0	10.0	7.0
12	11.5	---	---	---	4.0	2.5	7.0	6.5	---	3.0	9.0	8.0
13	11.5	---	---	---	3.5	2.0	7.0	5.5	---	4.5	10.0	7.0
14	12.5	---	---	---	4.0	2.5	6.0	6.0	---	5.5	9.5	6.5
15	13.5	---	---	---	4.5	2.5	6.5	5.5	7.0	4.5	9.5	5.0
16	13.5	---	---	6.5	4.0	2.0	9.5	5.5	7.5	4.5	14.0	5.0
17	13.5	---	8.5	6.5	4.0	2.0	7.5	6.0	6.0	3.5	13.5	5.5
18	14.0	---	9.5	8.0	5.5	4.0	7.0	6.0	5.5	2.0	16.0	6.5
19	13.5	---	9.0	7.5	5.0	3.5	6.5	5.5	6.0	2.5	10.5	8.0
20	13.5	---	7.0	5.0	3.5	2.0	7.0	6.0	7.0	4.5	14.5	9.0
21	14.0	---	6.5	4.5	3.0	1.0	---	---	7.5	3.5	14.5	8.5
22	12.5	---	7.5	6.5	4.0	2.5	---	---	9.0	4.0	12.0	9.5
23	10.5	---	---	6.5	4.5	2.5	---	---	8.0	4.0	---	8.0
24	12.5	---	8.0	6.5	4.5	2.5	---	---	8.5	4.0	---	10.0
25	12.0	---	9.0	7.5	5.0	2.5	---	---	8.0	5.0	---	8.0
26	12.0	---	8.5	7.0	---	1.5	---	---	9.0	6.5	15.0	8.0
27	11.5	---	8.0	6.5	5.0	3.5	---	---	9.5	7.5	15.5	9.0
28	12.0	---	8.5	7.0	---	5.0	---	---	9.5	6.5	---	---
29	9.5	---	7.5	6.0	6.5	5.5	---	---	---	---	---	---
30	---	---	7.0	5.5	7.0	6.5	---	---	---	---	---	---
31	---	---	---	---	6.5	4.5	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	10.5	16.0	11.0	20.0	---	22.0		---	---	---	---
2	12.0	9.5	18.0	---	20.0	---	22.5		---	---	---	---
3	13.5	9.5	17.5	---	20.0	---	22.0		---	---	---	---
4	17.5	9.0	15.0	---	21.0	---	22.0		22.5	17.5	---	---
5	15.5	10.0	12.5	10.0	19.0	---	22.5		23.0	---	---	---
6	17.0	10.0	12.0	8.5	20.0	---	21.5		23.0	17.5	---	---
7	17.0	10.5	14.5	9.5	19.5	---	22.0		23.5	18.5	---	---
8	16.5	11.0	14.0	9.0	21.0	---	22.0		23.5	18.5	20.5	17.0
9	12.0	8.5	---	---	21.0	---	23.0		23.5	19.5	20.5	17.0
10	16.0	7.5	17.5	---	19.5	---	21.0		23.5	19.5	---	---
11	16.5	9.0	17.5	---	20.5	---	22.0		24.0	19.5	19.0	---
12	17.5	10.5	18.5	---	20.5	---	23.0		22.5	20.0	18.0	---
13	15.0	---	19.5	---	20.5	---	23.0		22.0	19.0	16.5	---
14	15.0	---	20.0	---	20.5	---	---		20.5	18.5	15.5	---
15	15.0	---	20.5	---	20.5	---	---		20.5	---	17.0	---
16	14.5	---	20.5	---	20.5	---	---		21.0	---	17.0	---
17	13.5	10.5	17.0	---	21.0	---	---		20.5	---	---	---
18	13.0	---	19.0	---	21.0	---	---		20.5	16.5	---	---
19	13.5	---	19.0	---	20.5	---	---		20.5	15.0	15.0	---
20	14.0	---	20.0	---	22.0	---	---		21.0	16.5	---	---
21	14.0	8.5	18.0	13.5	22.0	---	---		21.5	---	---	---
22	13.5	---	20.5	---	22.0	---	---		21.0	19.0	15.0	11.0
23	14.0	---	18.5	---	22.5	---	---		21.5	17.5	16.5	12.0
24	16.0	---	18.5	---	22.5	---	---		22.0	---	16.5	13.5
25	15.5	---	18.5	---	21.5	---	---		---	---	17.0	13.0
26	15.5	---	19.5	---	22.5	---	---		---	---	17.0	---
27	16.0	12.0	19.5	---	22.0	---	---		---	---	17.0	13.5
28	16.5	---	20.5	---	20.5	---	---		---	---	17.0	13.5
29	15.0	11.5	19.5	---	20.0	8.5	---		---	---	17.0	14.0
30	17.0	---	20.0	---	22.0	---	---		---	---	16.5	13.0
31	---	---	18.0	---	---	---	---		---	---	---	---

09153400 WEST SALT CREEK NEAR MACK, CO

LOCATION.--Lat 39°18'31", long 108°58'59", in SW¼NE¼ sec.3, T.9 S., R.104 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank at upstream side of bridge, 0.8 mi (1.3 km) downstream from Prairie Canyon, and 8.7 mi (14.0 km) northwest of Mack.

DRAINAGE AREA.--168 mi² (435 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

REVISED RECORDS.--WDR CO-75-2: 1974.

GAGE.--Water-stage recorder. Altitude of gage is 4,740 ft (1,445 m), from topographic map.

REMARKS.--Records fair. No diversion above station. A few stock ponds on tributaries above station.

AVERAGE DISCHARGE.--5 years, 0.40 ft³/s (0.011 m³/s), 290 acre-ft/yr (358,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) Aug. 8, 1974, gage height, 7.0 ft (2.13 m), from floodmarks, from rating curve extended above 110 ft³/s (3.1 m³/s); no flow most of time each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 7	unknown	*533	15.1	4.30	1.311	Mar. 26	1200	325	9.20	3.53	1.076

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.07	5.4	7.8	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	40	.09	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	21	.00	.00	6.1	.00	.00	.00
6	24	4.2	.00	.00	.00	1.7	.00	.00	.04	.00	.00	.00
7	55	.52	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
12	.00	.00	.00	.00	.00	.37	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	1.2	.00	.27	.00	.00	1.9	.00
23	.00	.00	.00	.00	.00	.59	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	7.0	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.15	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.04	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.04	---	.00	---	.00	.00	---
TOTAL	79.00	4.72	.00	.00	.00	74.59	6.79	8.07	6.14	2.91	1.90	.00
MEAN	2.55	.16	.000	.000	.000	2.41	.23	.26	.20	.094	.061	.000
MAX	55	4.2	.00	.00	.00	40	5.4	7.8	6.1	2.9	1.9	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	157	9.4	.00	.00	.00	148	13	16	12	5.8	3.8	.00

CAL YR 1977 TOTAL 92.30 MEAN .25 MAX 55 MIN .00 AC-FT 183
WTR YR 1978 TOTAL 184.12 MEAN .50 MAX 55 MIN .00 AC-FT 365

09153400 WEST SALT CREEK NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1973 to current year.
WATER TEMPERATURES: September 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1973.

REMARKS.--No flow during most of period of record. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 12,600 micromhos Mar. 10, 1974; minimum, 264 micromhos Mar. 7, 1976.
WATER TEMPERATURES: Maximum, 34.5°C July 19, 1974; minimum, 0.5°C Mar. 7, 8, 1974.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 12,000 micromhos May 22, Aug. 22; minimum, 264 micromhos Mar. 7.
WATER TEMPERATURES: Not determined.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 07...	0845	55	1340	--	--	--	590	410	180
MAR 03...	1200	3.5	3050	7.3	4.0	11.9	1300	1200	310
APR 01...	0830	.51	2040	7.5	11.0	8.8	480	300	87

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 07...	35	86	1.5	8.4	220	--	180	590	8.9
MAR 03...	130	200	2.4	9.9	97	0	80	1500	24
APR 01...	65	300	5.9	3.9	220	0	180	890	21

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 07...	.4	3.6	1030	1.40	--	1.0	.01	50	10
MAR 03...	.6	5.3	2240	3.05	21.2	2.0	.01	40	20
APR 01...	.4	9.6	1490	2.03	2.05	.40	.10	40	20

09153400 WEST SALT CREEK NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---				---	1940	---	---	---	---	
2	---	---				3200	2600	2570	---	---	---	
3	---	---				2740	1900	---	---	---	---	
4	---	---				3010	---	---	---	---	---	
5	---	---				2380	---	---	2480	---	---	
6	1660	2150				3890	---	---	1670	---	---	
7	1470	2250				4530	---	---	---	---	---	
8	---	---				---	---	---	---	---	---	
9	---	---				---	---	---	---	---	---	
10	---	---				---	---	---	---	3210	---	
11	---	---				---	---	---	---	1620	---	
12	---	---				2480	---	---	---	---	---	
13	---	---				4120	---	---	---	---	---	
14	---	---				---	---	---	---	---	---	
15	---	---				---	---	---	---	---	---	
16	---	---				---	---	---	---	---	---	
17	---	---				---	---	---	---	---	---	
18	---	---				---	---	---	---	---	---	
19	---	---				---	---	---	---	---	---	
20	---	---				---	---	---	---	---	---	
21	---	---				1500	---	---	---	---	---	
22	---	---				2110	---	7120	---	---	3130	
23	---	---				2230	---	---	---	---	---	
24	---	---				3110	---	---	---	---	---	
25	---	---				2470	---	---	---	---	---	
26	---	---				947	---	---	---	---	---	
27	---	---				918	---	---	---	---	---	
28	---	---				920	---	---	---	---	---	
29	---	---				918	---	---	---	---	---	
30	---	---				859	---	---	---	---	---	
31	---	---				865	---	---	---	---	---	

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---							---	---
2	---	---	---	---							8.5	5.5
3	---	---	---	---							9.5	5.0
4	---	---	---	---							9.5	3.0
5	---	---	---	---							11.5	6.5
6	21.0	14.0	8.5	7.5							27.0	7.0
7	21.0	8.5	15.5	8.0							6.0	4.0
8	---	---	---	---							---	---
9	---	---	---	---							---	---
10	---	---	---	---							---	---
11	---	---	---	---							---	---
12	---	---	---	---							14.0	6.5
13	---	---	---	---							12.0	3.0
14	---	---	---	---							---	---
15	---	---	---	---							---	---
16	---	---	---	---							---	---
17	---	---	---	---							---	---
18	---	---	---	---							---	---
19	---	---	---	---							---	---
20	---	---	---	---							---	---
21	---	---	---	---							21.0	3.0
22	---	---	---	---							13.5	5.0
23	---	---	---	---							24.5	5.0
24	---	---	---	---							18.5	10.0
25	---	---	---	---							18.5	6.5
26	---	---	---	---							19.0	11.5
27	---	---	---	---							21.5	12.5
28	---	---	---	---							21.5	12.5
29	---	---	---	---							21.5	13.0
30	---	---	---	---							19.0	14.0
31	---	---	---	---							20.5	14.5

09153400 WEST SALT CREEK NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	10.5	---	---	---	---	---	---	---	---		
2	19.5	8.5	25.5	7.5	---	---	---	---	---	---		
3	11.0	7.0	---	---	---	---	---	---	---	---		
4	---	---	---	---	---	---	---	---	---	---		
5	---	---	---	---	14.5	11.5	---	---	---	---		
6	---	---	---	---	11.0	10.0	---	---	---	---		
7	---	---	---	---	---	---	---	---	---	---		
8	---	---	---	---	---	---	---	---	---	---		
9	---	---	---	---	---	---	---	---	---	---		
10	---	---	---	---	---	---	21.0	17.5	---	---		
11	---	---	---	---	---	---	17.5	14.5	---	---		
12	---	---	---	---	---	---	---	---	---	---		
13	---	---	---	---	---	---	---	---	---	---		
14	---	---	---	---	---	---	---	---	---	---		
15	---	---	---	---	---	---	---	---	---	---		
16	---	---	---	---	---	---	---	---	---	---		
17	---	---	---	---	---	---	---	---	---	---		
18	---	---	---	---	---	---	---	---	---	---		
19	---	---	---	---	---	---	---	---	---	---		
20	---	---	---	---	---	---	---	---	---	---		
21	---	---	---	---	---	---	---	---	---	---		
22	---	---	18.0	11.0	---	---	---	---	24.0	18.0		
23	---	---	---	---	---	---	---	---	---	---		
24	---	---	---	---	---	---	---	---	---	---		
25	---	---	---	---	---	---	---	---	---	---		
26	---	---	---	---	---	---	---	---	---	---		
27	---	---	---	---	---	---	---	---	---	---		
28	---	---	---	---	---	---	---	---	---	---		
29	---	---	---	---	---	---	---	---	---	---		
30	---	---	---	---	---	---	---	---	---	---		
31	---	---	---	---	---	---	---	---	---	---		

09160000 BADGER WASH OBSERVATION RESERVOIR 4-A NEAR MACK, CO

LOCATION.--Lat 39°19'52", long 108°55'49", in NE¼NE¼ sec.36, T.8 S., R.104 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank just upstream from Prairie Dog Reservoir and 8 mi (12.9 m) northwest of Mack.

DRAINAGE AREA.--0.022 mi² (0.057 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1976 to current year. Records of annual maximums previously published for water years 1954-73.

GAGE.--Water-stage recorder and 18-inch Parshall flume. Altitude of gage is 4,940 ft (1,506 m), from topographic map.

REMARKS.--Records good. No diversions above station.

COOPERATION.--Maximum discharge for period of record furnished by U.S. Bureau of Land Management.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48 ft³/s (1.36 m³/s) July 12, 1965; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.40 ft³/s (0.068 m³/s) at 1930 Oct. 6; no flow most of year.

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          DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
                                        MEAN VALUES

                                      OCT. 6    0.03

      CAL YR 1977   TOTAL 0.05    MEAN .000    MAX .03    MIN .00    AC-FT .1
      WTR YR 1978   TOTAL 0.03    MEAN .000    MAX .03    MIN .00    AC-FT .06
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09160000 BADGER WASH OBSERVATION RESERVOIR 4-A NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

INSTRUMENTATION.--Pumping sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)
OCT											
06...	1905	2000	1200	1100	460	16	21	.3	11	160	130
06...	1910	1400	870	750	330	12	17	.3	9.0	150	120
06...	1915	2700	1300	1100	480	25	140	1.7	15	210	170
06...	1920	1910	1100	930	400	15	28	.4	10	160	130

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT										
06...	--	1.9	.2	11	--	--	--	--	80	50
06...	770	3.5	.2	11	1230	1.67	--	--	60	90
06...	--	12	.2	15	--	--	--	--	110	180
06...	980	3.9	.2	8.0	1530	2.08	.33	.01	50	100

09160500 BADGER WASH OBSERVATION RESERVOIR 12 NEAR MACK, CO

LOCATION.--Lat 39°19'24", long 108°55'48", in NE¼NE¼ sec.36, T.8 S., R.104 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank just upstream from Middle Basin Reservoir and 7.5 mi (12.1 km) northwest of Mack.

DRAINAGE AREA.--0.092 mi² (0.238 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1976 to current year.

GAGE.--Water-stage recorder and 18-inch Parshall flume. Altitude of gage is 4,865 ft (1,483 m), from topographic map.

REMARKS.--Records poor. No diversions above gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25 ft³/s (0.71 m³/s) Oct. 6, 1977; no flow most of period.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 25 ft³/s (0.71 m³/s) Oct. 6; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

OCT. 6	0.50	MAY 1	0.01
NOV. 6	.14	AUG. 22	.14

CAL YR 1977	TOTAL 1.07	MEAN .003	MAX .50	MIN .00	AC-FT 2.1
WTR YR 1978	TOTAL 0.79	MEAN .002	MAX .50	MIN .00	AC-FT 1.6

09160500 BADGER WASH OBSERVATION RESERVOIR 12 NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

INSTRUMENTATION.--Pumping sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)
OCT											
06...	1715	900	500	370	190	7.0	23	.4	6.4	160	130
06...	1905	883	400	240	150	6.0	31	.7	6.7	190	160
06...	1910	1400	730	610	280	8.0	28	.5	7.6	150	120
06...	1925	1240	650	550	250	7.0	11	.2	6.3	130	110
06...	1935	1200	580	500	220	7.0	15	.3	5.6	100	82
06...	1950	1300	730	610	280	7.0	8.3	.1	5.7	140	110
06...	1955	1150	600	510	230	6.5	8.8	.2	5.1	110	90
06...	2005	954	520	450	200	5.0	4.8	.1	4.6	80	66
06...	2030	780	470	410	180	4.0	3.4	.1	4.0	70	57
06...	2045	810	490	420	190	4.0	3.4	.1	4.0	86	71
NOV											
06...	1300	840	470	320	180	5.5	15	.3	4.7	180	150
06...	1305	710	390	330	150	4.8	12	.3	4.3	73	60
06...	1310	600	340	220	130	3.8	4.0	.1	3.7	150	120
06...	1315	575	320	190	120	3.9	7.3	.2	3.6	150	120
06...	1320	690	390	240	150	3.7	3.2	.1	4.0	180	150
06...	1325	600	340	220	130	3.7	3.5	.1	3.8	150	120
06...	1335	610	340	190	130	3.6	3.1	.1	3.7	180	150
06...	1340	470	240	110	93	2.6	2.0	.1	3.2	160	130
06...	1345	400	230	130	87	2.3	1.6	.0	3.0	120	98
06...	1350	470	260	120	99	3.2	2.0	.1	3.2	170	140
06...	1355	560	310	200	120	2.9	2.5	.1	3.4	140	110
06...	1425	450	240	140	91	2.8	3.0	.1	2.8	120	98
06...	1500	430	240	130	92	2.9	3.3	.1	2.8	140	110
06...	1505	410	220	120	83	2.8	5.6	.2	2.7	120	98
06...	1515	500	290	180	110	3.2	4.7	.1	2.8	130	110
06...	1520	550	280	130	110	1.9	3.2	.1	3.0	180	150
06...	1525	600	310	180	120	3.0	2.5	.1	3.0	160	130
06...	1530	615	340	250	130	2.8	2.4	.1	3.0	110	90
06...	1540	530	280	190	110	2.4	2.5	.1	2.7	110	90
06...	1545	450	230	150	88	2.0	1.8	.1	2.6	100	82
06...	1550	375	200	110	76	2.1	1.6	.1	2.4	110	90
06...	1555	430	210	130	83	1.8	1.6	.0	2.4	100	82
06...	1600	480	240	140	94	2.0	1.7	.0	2.4	130	110
06...	1605	515	260	170	100	2.1	1.7	.0	2.5	110	90
06...	1610	540	280	210	110	2.4	1.7	.0	2.5	94	77
AUG											
22...	1350	2100	1200	1100	440	20	25	.3	16	160	130
22...	1410	2200	1100	970	440	20	29	.4	16	160	131

09160500 BADGER WASH OBSERVATION RESERVOIR 12 NEAR MACK, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
06...	420	4.3	.1	6.1	737	1.00	--	.30	.01	70	140
06...	280	8.6	.1	11	587	.80	--	--	--	100	100
06...	630	9.6	.2	11	1050	1.43	--	--	--	70	110
06...	560	2.6	.1	6.3	909	1.24	--	.22	.01	50	130
06...	520	2.5	.2	5.0	825	1.12	--	.15	.01	30	110
06...	630	7.0	.2	9.8	1020	1.39	--	--	--	20	30
06...	530	2.0	.1	5.3	843	1.15	--	.18	.01	20	20
06...	450	1.3	.1	4.6	711	.97	--	.15	.01	80	20
06...	380	.2	.1	4.4	611	.83	--	.17	.01	10	0
06...	420	1.3	.2	4.5	670	.91	--	.14	.01	10	10
NOV											
06...	420	3.1	.1	5.3	723	.98	--	.09	.00	410	210
06...	330	2.4	.2	9.0	550	.75	--	.11	.01	160	200
06...	270	1.5	.1	5.5	493	.67	--	.08	.01	20	80
06...	260	2.0	.1	5.6	477	.65	--	.09	.00	30	100
06...	350	1.4	.1	5.2	607	.83	--	.10	.00	50	70
06...	280	1.5	.1	5.7	503	.68	--	.10	.00	20	50
06...	270	1.5	.1	5.8	507	.69	--	.09	.00	20	40
06...	210	1.2	.1	4.4	396	.54	--	.13	.01	30	30
06...	160	1.1	.1	4.8	320	.44	--	.11	.01	20	0
06...	200	1.0	.1	5.2	398	.54	--	.11	.00	20	0
06...	250	1.2	.1	4.9	455	.62	--	.10	.00	30	40
06...	180	1.3	.1	4.8	345	.47	--	.09	.00	10	8
06...	180	1.0	.1	5.2	357	.49	--	.07	.00	40	20
06...	170	1.5	.1	5.1	330	.45	--	.05	.00	40	20
06...	220	1.3	.1	5.4	412	.56	--	.05	.00	10	0
06...	250	1.2	.1	4.6	463	.63	--	.05	.00	20	20
06...	260	.9	.1	4.5	473	.64	--	.05	.00	40	8
06...	280	1.1	.2	4.4	479	.65	--	.09	.01	20	20
06...	230	.9	.1	3.6	407	.55	--	.09	.00	10	30
06...	180	.8	.1	3.7	329	.45	--	.09	.00	20	0
06...	150	.7	.1	3.6	296	.40	--	1.2	.00	20	0
06...	170	.7	.1	3.3	313	.43	--	.06	.00	50	8
06...	200	.8	.1	3.6	369	.50	--	.10	.01	10	0
06...	220	.7	.1	3.6	385	.52	--	.07	.01	10	0
06...	240	.7	.1	3.8	408	.55	--	.09	.00	30	0
AUG											
22...	970	52	.4	10	1610	2.19	39.5	.11	.01	50	200
22...	1100	6.8	.4	10	1700	2.31	12.4	--	.01	70	190

09161000 BADGER WASH OBSERVATION RESERVOIR 2-A NEAR MACK, CO

LOCATION.--Lat 39°19'46", long 108°56'33", in NW¼NW¼ sec.36, T.8 S., R.104 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on left bank just upstream from West Twin Reservoir and 8.3 mi (13.4 km) northwest of Mack.

DRAINAGE AREA.--0.148 mi² (0.383 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1976 to current year. Records of annual maximums previously published for water years 1954-73.

GAGE.--Water-stage recorder and 2-ft Parshall flume. Altitude of gage is 4,935 ft (1,504 m), from topographic map.

REMARKS.--Records poor. No diversions above station.

COOPERATION.--Maximum discharge for period of record furnished by U.S. Bureau of Land Management.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 262 ft³/s (7.42 m³/s) July 25, 1965; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 40 ft³/s (1.13 m³/s) Oct. 6; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

OCT. 6	1.0	AUG. 22	0.02
NOV. 6	.12		

CAL YR 1977	TOTAL 1.30	MEAN .004	MAX 1.0	MIN .00	AC-FT 2.6
WTR YR 1978	TOTAL 1.14	MEAN .003	MAX 1.0	MIN .00	AC-FT 2.3

09161000 BADGER WASH RESERVOIR 2-A, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to current year.

INSTRUMENTATION.--Pumping sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)
OCT												
06...	1905	E1.0	1250	590	360	210	16	30	.5	8.3	280	230
NOV												
06...	1510	E.12	450	230	59	83	5.8	8.8	.3	3.4	210	170
06...	1515	--	710	340	160	120	9.8	33	.8	4.5	220	180
06...	1520	--	600	280	130	100	6.6	18	.5	4.2	180	150
06...	1525	--	460	230	99	84	4.9	5.0	.1	4.1	160	130
06...	1535	--	390	210	98	78	4.5	4.3	.1	3.9	140	110
06...	1540	--	365	190	85	70	4.0	3.4	.1	3.6	130	110
06...	1550	--	340	170	53	61	3.7	3.1	.1	3.3	140	110
AUG												
22...	1350	1.2	1500	940	750	320	35	70	1.0	14	240	200
22...	1410	.99	1500	970	760	330	35	66	.9	14	250	210

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
06...	400	7.3	.2	7.6	818	1.11	--	--	--	110	180
NOV											
06...	170	2.1	.1	5.4	382	.52	--	.02	.00	50	200
06...	340	4.9	.1	5.0	626	.85	--	.07	.00	30	80
06...	270	2.1	.1	4.8	495	.67	--	.08	.00	30	80
06...	190	1.0	.1	4.6	373	.51	--	.11	.00	10	80
06...	170	1.0	.1	4.7	336	.46	--	.11	.00	10	50
06...	150	.9	.1	4.7	301	.41	--	.09	.00	30	60
06...	130	.8	.1	4.3	276	.38	--	.12	.00	10	30
AUG											
22...	400	20	.6	8.5	992	1.35	3.32	.94	.06	520	420
22...	380	37	.6	8.6	1000	1.36	2.67	.93	.01	660	420

E ESTIMATED.

09163050 BADGER WASH NEAR MACK, CO

LOCATION.--Lat 39°17'36", long 108°55'59", in NE¼NW¼ sec.7, T.9 S., R.103 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on left bank 250 ft (76 m) upstream from bridge, 2.9 mi (4.7 km) upstream from mouth, and 6.0 mi (9.7 km) northwest of Mack.

DRAINAGE AREA.--6.51 mi² (16.86 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,690 ft (1,430 m), from topographic map.

REMARKS.--Records good. Flow is mostly water wasted into creek 300 ft (91 m) above gage from Government Highline Canal. Natural flow of stream affected by numerous small detention reservoirs on tributaries upstream. No known diversion above gage.

AVERAGE DISCHARGE.--5 years, 6.36 ft³/s (0.180 m³/s), 4,610 acre-ft/yr (5.68 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 618 ft³/s (17.5 m³/s) July 4, 1977, gage height, 4.75 ft (1.448 m), from peak indicator, from rating curve extended above 60 ft³/s (1.7 m³/s); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 98 ft³/s (2.78 m³/s) at 2000 Oct. 6, gage height, 3.48 ft (1.061 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	.00	.00	.00	.00	.00	.00	22	13	9.7	2.6	.23
2	19	.00	.00	.00	.00	.00	.00	26	12	5.7	.35	.40
3	19	.00	.00	.00	.00	.00	.00	21	6.0	5.1	1.5	1.6
4	19	.00	.00	.00	.00	.00	.00	16	9.8	2.1	4.1	2.1
5	18	.00	.00	.00	.00	.00	.00	14	7.8	4.3	5.6	.61
6	22	.00	.00	.00	.00	.00	.00	18	4.6	1.8	7.6	.17
7	20	.00	.00	.00	.00	.00	.00	18	3.7	.71	6.4	.27
8	24	.00	.00	.00	.00	.00	.00	18	8.4	1.9	3.0	3.7
9	28	.00	.00	.00	.00	.00	.00	19	9.4	.04	1.7	6.5
10	28	.00	.00	.00	.00	.00	.00	16	10	.20	.34	5.4
11	33	.00	.00	.00	.00	.00	.00	14	13	.08	.59	4.4
12	33	.00	.00	.00	.00	.00	.00	15	13	.18	1.2	5.1
13	35	.00	.00	.00	.00	.00	.00	13	13	.63	4.7	4.3
14	35	.00	.00	.00	.00	.00	.00	12	13	1.4	3.0	2.5
15	33	.00	.00	.00	.00	.00	.00	12	12	4.1	2.4	4.9
16	33	.00	.00	.00	.00	.00	.00	4.3	14	3.2	.87	8.0
17	33	.00	.00	.00	.00	.00	.00	2.2	13	.87	.61	11
18	33	.00	.00	.00	.00	.00	15	7.5	24	1.9	2.1	14
19	33	.00	.00	.00	.00	.00	36	13	17	2.7	1.4	19
20	32	.00	.00	.00	.00	.00	28	14	15	.57	.14	27
21	32	.00	.00	.00	.00	.00	39	13	14	.59	.22	37
22	30	.00	.00	.00	.00	.00	24	12	10	.35	.42	44
23	11	.00	.00	.00	.00	.00	39	11	11	.55	.14	39
24	.01	.00	.00	.00	.00	.00	49	11	5.0	1.7	.13	33
25	.00	.00	.00	.00	.00	.00	38	9.8	1.9	.56	.16	32
26	.00	.00	.00	.00	.00	.00	32	8.1	2.7	.30	.18	28
27	.00	.00	.00	.00	.00	.00	20	7.3	1.9	.88	.44	26
28	.00	.00	.00	.00	.00	.00	27	10	2.3	1.2	2.8	26
29	.00	.00	.00	.00	---	.00	26	14	5.2	2.6	1.2	25
30	.00	.00	.00	.00	---	.00	19	10	9.3	4.6	.14	26
31	.00	---	.00	.00	---	.00	---	11	---	4.1	.24	---
TOTAL	623.01	.00	.00	.00	.00	.00	392.00	412.2	297.0	64.61	56.27	437.18
MEAN	20.1	.000	.000	.000	.000	.000	13.1	13.3	9.90	2.08	1.82	14.6
MAX	35	.00	.00	.00	.00	.00	49	26	24	9.7	7.6	44
MIN	.00	.00	.00	.00	.00	.00	.00	2.2	1.9	.04	.13	.17
AC-FT	1240	.00	.00	.00	.00	.00	778	818	589	128	112	867

CAL YR 1977 TOTAL 3343.76 MEAN 9.16 MAX 60 MIN .00 AC-FT 6630
WTR YR 1978 TOTAL 2282.27 MEAN 6.25 MAX 49 MIN .00 AC-FT 4530

09163050 BADGER WASH NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1973 to current year.
WATER TEMPERATURES: June 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1973.

REMARKS.--No flow during most of period November to April each year. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,920 micromhos Nov. 1, 1974; minimum, 228 micromhos June 14, 1978.
WATER TEMPERATURES: Maximum, 33.5°C July 20, 1978; minimum, 5.5°C Nov. 5, 1975, Mar. 29, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,380 micromhos Apr. 18; minimum, 228 micromhos June 14.
WATER TEMPERATURES: Maximum, 33.5°C July 20; minimum, not determined.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
19...	1030	35	1150	8.5	11.0	9.5	260	120	75
APR									
18...	1610	29	1900	7.7	17.5	9.2	600	460	190
JUL									
11...	1045	.15	600	8.1	20.0	7.6	230	130	70

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT									
19...	17	130	3.5	4.5	170	0	140	160	190
APR									
18...	31	140	2.5	9.1	170	0	140	470	190
JUL									
11...	14	49	1.4	2.0	120	0	98	140	57

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT									
19...	.5	6.0	667	.91	63.0	.01	.00	70	20
APR									
18...	.4	9.7	1130	1.54	88.5	1.7	.00	40	20
JUL									
11...	.2	7.9	402	.55	.16	.55	.06	40	0

09163050 BADGER WASH NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	952						---	615	496	501	697	900
2	932						---	633	520	526	773	889
3	952						---	574	638	549	828	823
4	977						---	516	652	576	682	824
5	999						---	538	724	605	684	869
6	1060						---	552	815	567	689	997
7	1270						---	541	933	584	703	905
8	1290						---	546	548	667	732	861
9	1240						---	541	338	605	814	880
10	1160						---	558	333	676	1010	872
11	1120						---	562	328	608	1110	893
12	1100						---	572	323	623	1000	915
13	1070						---	570	315	561	892	920
14	1100						---	565	298	492	906	930
15	1150						---	561	320	505	936	950
16	1080						---	554	312	508	913	970
17	1120						---	522	294	560	914	990
18	1090						1060	481	273	526	907	1000
19	1140						453	516	272	522	876	1020
20	1100						537	553	317	569	1180	1040
21	1070						737	536	347	561	1520	1060
22	1130						764	523	370	588	1350	1030
23	1110						726	519	384	614	1420	1000
24	---						698	519	413	560	1500	991
25	---						724	511	462	596	1140	998
26	---						727	517	386	666	841	1010
27	---						675	489	379	605	872	1030
28	---						674	503	428	613	732	1030
29	---						639	497	460	619	793	1040
30	---						613	496	479	662	950	1050
31	---						---	497	---	682	902	---

09163050 BADGER WASH NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	14.0										
2	16.5	13.0										
3	16.5	13.0										
4	17.0	13.5										
5	17.5	15.0										
6	16.5	14.5										
7	17.0	14.0										
8	16.0	13.5										
9	14.5	12.5										
10	14.5	11.5										
11	13.5	10.5										
12	12.5	9.5										
13	12.0	9.0										
14	12.0	9.0										
15	13.0	9.5										
16	13.5	9.5										
17	14.0	10.0										
18	14.0	10.0										
19	13.5	10.0										
20	13.5	11.0										
21	14.0	11.0										
22	14.0	11.0										
23	13.5	7.5										
24	---	---										
25	---	---										
26	---	---										
27	---	---										
28	---	---										
29	---	---										
30	---	---										
31	---	---										

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	21.5	17.5	22.0	19.5	28.5	15.5	29.0	---
2			---	---	---	---	23.0	19.5	33.0	21.0	30.5	---
3			---	---	---	---	22.0	19.5	29.0	15.5	27.5	---
4			13.5	11.0	---	---	24.5	17.5	26.0	21.5	27.5	---
5			11.5	11.0	---	---	23.0	18.5	26.5	16.5	29.5	---
6			12.0	10.5	---	---	27.5	19.5	26.0	15.5	27.0	---
7			12.0	9.5	---	---	28.5	17.5	27.0	22.0	27.0	---
8			12.0	9.5	---	---	26.5	19.5	28.0	22.0	26.0	---
9			13.5	9.0	21.5	17.5	30.0	17.5	32.0	22.0	25.5	---
10			13.0	11.0	20.5	17.5	28.0	20.5	32.5	16.5	21.0	---
11			13.0	11.0	21.0	17.5	30.5	20.5	32.0	16.5	18.0	---
12			14.0	11.0	21.0	17.5	32.0	19.0	29.0	16.5	19.5	---
13			14.0	11.0	20.5	17.5	28.5	19.0	26.5	22.0	---	---
14			15.5	11.0	19.5	17.5	27.5	17.5	25.5	21.0	---	---
15			16.5	11.0	19.5	17.5	24.5	21.0	27.5	18.5	---	---
16			17.5	12.0	20.0	17.5	27.0	15.5	24.5	17.5	---	---
17			13.5	11.0	19.5	18.0	32.0	21.0	29.0	15.5	---	---
18			18.5	11.0	20.5	17.5	26.0	21.0	23.5	18.0	---	---
19			21.5	14.5	20.5	16.5	26.5	21.5	28.5	16.5	---	---
20			21.5	20.5	21.0	16.5	33.5	15.5	26.5	8.5	---	---
21			21.5	17.0	21.0	18.0	27.5	21.0	28.5	16.0	15.5	---
22			21.5	16.0	21.0	18.5	29.5	16.0	27.5	20.5	17.0	---
23			22.0	16.5	21.5	19.0	29.0	15.5	32.5	15.5	17.5	---
24			21.5	16.5	22.5	19.5	27.5	16.0	30.5	9.0	17.5	---
25			21.0	17.0	23.0	15.5	33.0	15.5	28.5	8.5	18.5	13.5
26			24.0	15.5	28.5	16.5	32.0	19.0	31.5	---	20.5	---
27			24.5	16.5	22.0	17.5	29.5	21.5	29.0	---	20.5	15.0
28			25.0	20.5	21.0	19.5	29.0	16.5	26.0	---	20.0	15.5
29			26.0	20.5	20.5	18.5	28.0	16.5	30.0	---	20.0	16.0
30			26.5	22.0	21.0	18.5	28.5	23.5	31.0	---	19.5	15.0
31			22.0	20.5	---	---	26.0	16.5	27.0	15.0	---	---

09163310 EAST SALT CREEK NEAR MACK, CO

LOCATION.--Lat 39°17'50", long 108°51'58", in SE¼SE¼ sec.3, T.9 S., R.103 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 100 ft (30 m) upstream from bridge, 200 ft (61 m) downstream from Dry Canyon wash, and 5.0 mi (8.0 km) north of Mack.

DRAINAGE AREA.--197 mi² (510 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,650 ft (1,417 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Some regulation by several small detention reservoirs and stock ponds on tributaries above station. A few small diversions for irrigation of hay meadows above station.

AVERAGE DISCHARGE.--5 years, 2.86 ft³/s (0.0810 m³/s), 2,070 acre-ft/yr (2.55 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) July 18, 1974, gage height, 9.95 ft (3.033 m), from floodmarks, from rating curve extended above 240 ft³/s (6.8 m³/s), on basis of slope-area measurement of peak flow; minimum daily, 0.06 ft³/s (0.002 m³/s) Mar. 16, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 19, 1972, reached a stage of 8.9 ft (2.71 m), from floodmarks (discharge, 2,160 ft³/s or 61.2 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 6	2030	855	24.2	6.00	1.829	Aug. 22	1700	*1,520	43.0	7.46	2.274

Minimum daily discharge, 0.06 ft³/s (0.002 m³/s) Mar. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.38	.17	.12	.20	.14	18	39	14	1.6	.50	.20
2	.44	.38	.17	.12	.17	15	23	39	13	1.7	.50	.17
3	.44	.38	.17	.10	.14	46	15	35	12	2.0	.38	.17
4	.44	.38	.17	.10	.14	.24	10	39	12	1.8	.28	.20
5	.44	23	.20	.10	.14	8.2	10	51	10	2.0	.52	.17
6	76	6.5	.20	.08	.14	2.4	9.4	53	9.7	2.2	.62	.28
7	49	1.1	.20	.08	.14	1.2	9.7	44	5.7	2.0	.62	.28
8	1.5	.33	.17	.08	.14	1.5	14	25	4.4	1.9	.86	.38
9	.86	.33	.17	.08	.14	1.9	18	30	3.9	1.7	.44	.33
10	.74	.33	.17	.08	.14	3.0	14	32	2.8	1.4	.50	.33
11	.62	.33	.14	.08	.14	1.5	14	35	3.0	1.5	.38	.33
12	.50	.33	.14	.08	.14	6.0	15	37	2.4	1.7	.28	.28
13	.50	.24	.14	.08	.14	2.4	18	40	1.5	2.1	.86	.44
14	.44	.17	.14	.08	.14	.62	17	44	1.1	1.1	.98	.50
15	.38	.12	.14	.08	.08	.14	18	52	.98	.50	.36	.62
16	.38	.12	.14	.08	.08	.06	20	62	.98	.74	1.3	.44
17	.33	.14	.14	.07	.08	.38	22	87	.50	1.0	.86	.74
18	.33	.14	.14	.10	.08	1.2	18	68	1.0	1.2	1.1	.74
19	.33	.10	.12	.10	.08	4.4	16	45	2.0	1.6	.98	.74
20	.38	.10	.12	.10	.08	6.5	12	32	3.4	1.8	1.3	.74
21	.38	.12	.12	.12	.10	6.5	13	27	2.4	1.2	1.3	.50
22	.38	.12	.12	.12	.10	5.5	16	32	1.7	.90	75	.74
23	.38	.12	.12	.12	.10	5.2	15	32	1.1	.66	2.4	.50
24	.38	.12	.10	.14	.10	3.2	14	32	1.1	.60	.44	.33
25	.38	.12	.08	.14	.10	2.8	14	31	1.1	.56	.44	.33
26	.38	.14	.10	.14	.12	.28	18	23	1.0	.50	.44	.33
27	.38	.14	.10	.17	.12	.24	32	20	1.2	.46	.44	.44
28	.38	.14	.08	.17	.12	1.3	51	18	1.8	.44	.44	.50
29	.38	.14	.08	.17	---	2.6	39	16	2.0	.46	.44	.44
30	.38	.14	.10	.20	---	4.7	39	15	1.5	.48	.38	.38
31	.38	---	.07	.20	---	6.6	---	15	---	.40	.24	---
TOTAL	138.67	36.20	4.22	3.48	3.39	141.70	562.1	1150	119.26	38.20	96.18	12.57
MEAN	4.47	1.21	.14	.11	.12	4.57	18.7	37.1	3.98	1.23	3.10	.42
MAX	76	23	.20	.20	.20	46	51	87	14	2.2	75	.74
MIN	.33	.10	.07	.07	.08	.06	9.4	15	.50	.40	.24	.17
AC-FT	275	72	8.4	6.9	6.7	281	1110	2280	237	76	191	25

CAL YR 1977 TOTAL 374.79 MEAN 1.03 MAX 76 MIN .07 AC-FT 743
WTR YR 1978 TOTAL 2305.97 MEAN 6.32 MAX 87 MIN .06 AC-FT 4570

09163310 EAST SALT CREEK NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to current year.
WATER TEMPERATURES: July 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 13,500 micromhos Apr. 26, 1974; minimum, 488 micromhos May 13, 1978.
WATER TEMPERATURES: Maximum, 33.5°C July 6, 1975; minimum, freezing point on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 6,270 micromhos Mar. 1; minimum, 488 micromhos May 13.
WATER TEMPERATURES: Maximum, 32.0°C July 14; minimum, freezing point several days during February.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT									
19...	0930	5.5	4800	7.8	8.0	9.0	2100	1700	400
FEB									
14...	0950	.14	5900	7.9	4.5	9.5	2500	2100	470
APR									
01...	1100	23	1836	7.6	12.0	8.0	630	440	130
JUL									
14...	0730	.80	2000	7.2	16.5	7.0	640	450	170

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT									
19...	260	570	5.5	6.9	430	0	350	2300	280
FEB									
14...	310	740	6.5	6.4	460	0	380	3200	320
APR									
01...	73	210	3.7	5.4	220	0	180	810	14
JUL									
14...	52	180	3.1	5.5	230	0	190	670	110

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT									
19...	.4	17	4050	5.51	60.1	.17	.09	50	400
FEB									
14...	.4	15	5290	7.19	2.00	.56	.00	30	420
APR									
01...	.4	6.8	1360	1.85	85.6	.93	.00	60	20
JUL									
14...	.3	11	1310	1.78	2.83	.21	.15	90	120

09163310 EAST SALT CREEK NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2130	5850	5790	5620	5600	5120	1830	920	1330	2660	3310	3970
2	1980	5940	5740	5610	5640	2620	952	925	1400	3030	3400	4000
3	2150	5620	5750	5610	5630	1360	615	876	1450	3060	3500	4040
4	2280	5520	5760	5600	5740	1850	948	806	1500	2970	3800	4060
5	2330	5490	5770	5600	5820	1850	1400	754	1560	2670	2870	4120
6	2300	4150	5760	5610	5770	2520	1850	751	1640	3020	3010	3620
7	1450	3170	5760	5610	5870	2400	1420	855	1730	2830	2880	3350
8	2150	4250	5750	5620	5670	2500	1330	980	2620	2750	3240	2950
9	2730	4430	5770	5630	5880	2500	1310	1050	3960	1930	3200	3510
10	3220	4650	5740	5650	5940	1900	1270	1120	4260	2500	3160	3550
11	3780	4920	5750	5640	5570	2000	1320	871	4310	2850	3530	3600
12	4240	5230	5700	5660	5860	1700	1220	778	4250	2510	3300	3940
13	4490	5440	5740	5680	5900	1800	1090	626	4160	2510	2700	3440
14	4970	5610	5730	5670	5880	1900	1080	633	4110	2210	2810	3070
15	4930	5640	5720	5690	5740	2000	---	696	4020	2110	3110	2880
16	4870	5660	5730	5700	5740	2200	1000	837	3970	2230	2570	3560
17	4850	5660	5720	5610	5760	2400	1000	823	3910	2530	3070	3050
18	4830	5660	5720	5860	5690	2200	1100	836	3860	2500	2790	3170
19	4790	5650	5710	6060	5580	1900	902	867	3790	2510	2960	3410
20	4780	5670	5700	6030	5500	1900	798	917	3730	2600	2820	3440
21	4810	5670	5700	6020	5550	1900	715	1000	3510	2340	2750	3760
22	4870	5700	5690	6030	5520	1740	800	981	3580	2330	2850	3500
23	4940	5690	5680	5870	5450	1540	850	1030	3820	2680	2240	3710
24	5040	5680	5680	5870	5460	1750	900	1030	3800	3200	2430	4250
25	5140	5700	5670	6030	5410	1190	950	997	3640	3390	2390	4700
26	5230	5710	5660	5950	5390	1340	1000	1130	3500	3190	2260	4680
27	5330	5440	5650	5820	5300	1780	900	1200	3460	3300	2330	4090
28	5420	5740	5650	5760	5190	1940	900	1290	3610	3130	2580	4060
29	5520	5770	5640	5700	---	1990	900	1430	3100	3420	2730	4470
30	5630	5780	5630	5640	---	2020	900	1300	2690	3330	3080	4590
31	5730	---	5630	5580	---	2020	---	1240	---	3330	3950	---

09163310 EAST SALT CREEK NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	7.0	10.0	9.5	6.0	.5	---	---	---	---	7.0	5.0
2	17.0	6.5	10.0	9.0	7.0	2.5	---	---	6.0	1.0	6.5	3.5
3	19.0	8.0	10.5	9.0	8.0	3.5	---	---	8.0	1.5	5.5	2.5
4	19.0	9.5	10.5	9.0	8.5	5.5	---	---	7.5	1.5	9.0	2.0
5	19.0	11.5	11.0	9.5	7.5	2.0	---	---	7.0	1.0	8.0	4.0
6	16.0	11.0	11.0	6.5	6.0	.5	---	---	6.0	1.5	10.0	4.0
7	16.5	9.5	10.0	4.0	5.5	.5	---	---	6.5	2.5	---	---
8	16.5	7.5	10.5	9.0	6.0	1.0	---	---	8.0	1.0	---	---
9	15.5	7.0	10.0	9.0	5.5	.5	---	---	5.5	1.0	---	---
10	15.5	7.5	9.5	8.0	6.0	.5	---	---	9.0	3.0	---	---
11	15.0	5.0	9.5	8.0	5.5	.0	---	---	5.5	1.5	---	---
12	15.0	5.0	10.0	8.0	7.0	2.5	---	---	8.0	.5	---	---
13	15.5	5.5	9.5	7.5	6.5	.5	---	---	---	---	---	---
14	12.5	6.0	9.0	5.0	6.5	1.5	---	---	---	---	---	---
15	13.0	11.5	9.5	3.5	7.0	2.0	---	---	8.0	1.0	---	---
16	13.0	11.5	9.0	3.0	---	---	---	---	8.5	.5	---	---
17	12.5	11.5	9.0	3.5	---	---	7.0	3.0	7.0	.0	---	---
18	12.5	11.0	9.0	5.5	---	---	7.0	2.0	5.5	.0	---	---
19	12.0	11.0	9.5	4.5	---	---	6.0	2.5	7.5	.0	---	---
20	12.5	11.0	6.5	1.5	---	---	7.5	2.5	8.5	1.0	---	---
21	13.0	11.5	6.5	1.0	---	---	7.0	3.0	10.0	.0	17.0	4.5
22	12.5	11.0	8.0	3.5	---	---	7.0	3.0	10.5	.0	10.5	6.0
23	12.0	10.5	8.5	3.0	---	---	4.5	2.0	9.5	.0	15.5	4.5
24	12.0	10.5	7.5	3.5	---	---	6.5	1.0	9.0	.0	15.5	6.0
25	12.0	10.5	9.5	4.5	---	---	3.5	.5	9.0	1.5	16.5	3.0
26	11.5	10.5	9.0	3.5	---	---	3.5	.5	9.5	3.5	17.5	3.0
27	11.5	10.5	7.0	2.5	---	---	---	---	10.5	4.5	19.0	4.5
28	11.5	10.5	8.0	3.5	---	---	---	---	10.0	3.5	19.5	7.0
29	12.0	10.5	7.0	2.5	---	---	---	---	---	---	18.5	6.0
30	12.0	11.0	7.0	2.0	---	---	---	---	---	---	16.5	6.5
31	12.0	10.5	---	---	---	---	---	---	---	---	18.5	7.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	7.5	13.5	7.5	22.0	9.0	26.5	15.5	26.5	17.5	25.0	13.5
2	11.0	6.5	17.0	7.5	21.5	10.5	26.0	16.0	29.0	16.5	25.5	13.5
3	14.5	7.0	16.5	9.5	20.5	13.0	23.5	15.0	27.0	15.5	26.0	14.5
4	11.5	3.0	12.0	7.0	22.0	14.5	23.5	15.0	27.0	14.5	26.5	14.0
5	14.5	11.5	8.0	5.0	18.5	14.5	24.0	14.0	28.5	14.0	26.5	14.0
6	15.5	7.0	8.0	4.0	20.0	13.5	24.5	15.5	27.5	15.0	26.5	15.0
7	17.5	5.5	11.0	5.5	20.0	15.0	27.0	16.0	29.0	15.5	23.0	16.0
8	---	---	12.0	5.0	26.0	15.0	26.0	16.0	29.5	16.0	25.0	14.0
9	---	---	16.5	5.0	24.5	13.5	30.0	15.5	29.0	16.5	25.0	14.0
10	---	---	17.5	7.5	21.0	14.5	29.0	17.5	29.0	17.5	22.5	15.0
11	---	---	16.5	9.0	23.0	13.5	26.0	17.0	29.0	17.0	22.5	13.5
12	---	---	18.5	6.5	21.5	14.0	27.5	17.5	23.5	17.5	21.5	10.5
13	---	---	19.5	7.5	21.0	14.5	27.0	16.5	25.5	17.0	20.5	9.0
14	---	---	19.0	10.0	21.5	13.5	32.0	16.0	25.0	15.0	19.0	9.5
15	---	---	17.5	10.5	21.0	13.5	26.5	17.5	25.0	12.0	22.0	12.0
16	---	---	16.0	10.5	21.5	13.0	31.0	18.0	24.5	13.5	21.0	12.0
17	---	11.5	11.5	9.0	22.0	13.5	30.5	18.5	24.5	12.5	20.5	15.0
18	17.0	---	14.0	6.5	21.0	13.0	31.0	17.0	24.0	13.0	18.5	11.5
19	15.0	4.0	16.0	7.5	22.0	14.5	30.0	18.0	24.5	11.5	17.0	9.5
20	17.5	4.5	18.0	9.5	22.5	14.0	30.5	19.0	24.5	14.0	17.5	7.5
21	14.0	5.0	17.0	12.0	24.5	16.0	27.5	18.5	25.0	15.0	18.0	7.5
22	13.5	1.5	19.0	9.5	22.5	15.0	29.5	17.0	23.5	6.5	19.0	8.0
23	15.5	3.5	17.5	11.0	22.5	15.5	30.0	16.5	23.5	13.0	20.5	9.5
24	18.5	5.5	18.0	9.5	23.0	17.0	29.5	16.5	25.5	13.5	19.5	10.5
25	16.5	8.5	17.0	9.5	21.5	16.5	27.5	16.5	26.0	14.5	21.5	11.0
26	16.0	8.0	18.5	9.0	23.0	15.5	29.5	16.0	26.0	14.5	21.5	11.0
27	14.5	8.5	19.5	10.0	22.5	16.0	30.0	16.5	24.0	13.0	20.5	9.5
28	13.5	7.0	20.5	10.5	20.0	17.5	29.0	17.5	24.5	13.5	21.5	10.0
29	13.5	7.0	22.0	10.0	22.5	16.5	26.0	18.0	24.0	13.5	21.0	10.0
30	15.5	8.0	22.0	11.5	24.5	15.5	27.5	17.5	24.5	13.0	20.5	10.5
31	---	---	19.5	10.0	---	---	23.5	17.5	23.5	14.0	---	---

09163340 MACK WASH NEAR MACK, CO

LOCATION.--Lat 39°15'57", long 108°50'32", in NE¼NW¼ sec.8, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank just downstream from culvert under R Road, 0.2 mi (0.3 km) downstream from Highline Lake dam, and 3.1 mi (5.0 km) north of Mack.

DRAINAGE AREA.--15.9 mi^2 (41.2 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,615 ft (1,407 m), from topographic map.

REMARKS.--Records good. Flow regulated at times by Highline Lake, capacity, 3,400 acre-ft (4.19 hm^3). Mack Mesa Lake, capacity, 131 acre-ft (162,000 m^3) is on a tributary to Highline Lake. Natural flow of stream affected by several small detention reservoirs and stock ponds on tributaries upstream. Flows include water wasted into Highline Lake from Government Highline Canal just below Lateral No. 46.

AVERAGE DISCHARGE.--5 years, 26.1 ft^3/s (0.739 m^3/s), 18,910 acre-ft/yr (23.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204 ft^3/s (5.78 m^3/s) Apr. 20, 1975, gage height, 2.56 ft (0.780 m); minimum daily, 1.3 ft^3/s (0.037 m^3/s) June 20 to July 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 199 ft^3/s (5.64 m^3/s) at 2100 Apr. 21, gage height, 2.37 ft (0.722 m); minimum daily, 1.5 ft^3/s (0.042 m^3/s) Apr. 12-14, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	5.0	2.1	2.0	1.7	1.8	2.2	159	46	2.1	2.0	2.7
2	93	2.5	2.2	2.0	1.7	1.9	2.2	104	47	2.3	2.0	2.7
3	92	2.5	2.2	2.0	1.7	1.9	2.0	57	48	4.6	2.1	2.4
4	95	2.4	2.2	2.0	1.7	1.9	1.7	58	48	3.0	2.1	2.4
5	95	2.4	2.2	2.0	1.7	1.9	1.7	60	48	2.3	2.1	2.4
6	100	2.3	2.2	2.0	1.7	1.9	1.7	66	48	2.1	2.1	2.4
7	112	2.1	2.2	2.0	1.7	1.8	1.7	70	48	2.1	2.1	2.4
8	94	2.2	2.2	2.0	1.7	1.8	1.7	75	48	2.0	2.1	2.4
9	102	2.2	2.2	2.0	1.8	1.7	1.7	78	48	2.0	2.1	2.4
10	107	2.2	2.2	2.0	1.8	1.7	1.7	70	48	2.0	2.1	2.4
11	110	2.2	2.2	2.0	1.8	1.7	1.8	61	48	2.1	2.1	9.5
12	109	2.2	2.2	2.0	1.7	1.7	1.5	53	48	2.1	2.1	33
13	114	2.2	2.1	2.0	1.7	1.7	1.5	52	48	2.2	2.1	49
14	120	2.2	2.1	1.9	1.8	1.7	1.5	53	48	2.1	2.0	54
15	123	2.2	2.1	1.9	1.7	1.7	1.6	54	48	2.0	2.0	59
16	132	2.2	2.1	1.9	1.7	1.7	1.5	54	48	2.0	2.0	57
17	136	2.2	2.1	1.9	1.7	1.7	1.5	51	48	2.0	2.1	50
18	139	2.2	2.1	1.9	1.7	1.7	31	46	48	2.0	2.1	47
19	130	2.2	2.1	1.9	1.7	1.7	148	44	48	2.0	2.1	52
20	112	2.3	2.0	1.9	1.7	1.7	176	45	48	2.0	2.1	59
21	102	2.4	2.1	1.9	1.7	1.8	187	46	28	1.9	2.1	68
22	98	2.4	2.1	1.9	1.7	1.9	186	46	3.1	1.9	2.1	71
23	112	2.4	2.1	1.9	1.7	2.1	149	46	2.4	1.9	2.1	68
24	123	2.4	2.1	1.9	1.7	2.0	140	46	2.2	1.9	2.1	71
25	50	2.4	2.1	1.9	1.7	2.0	133	46	2.2	2.0	2.1	73
26	38	2.4	2.1	1.9	1.7	2.0	130	46	2.2	2.0	2.1	72
27	15	2.4	2.1	1.9	1.7	2.0	145	46	2.3	2.0	2.1	67
28	13	2.4	2.1	1.9	1.7	2.0	159	46	2.2	2.0	2.1	63
29	11	2.2	2.1	1.7	---	2.1	159	46	2.3	2.0	2.2	55
30	9.0	2.2	2.1	1.7	---	2.1	159	46	2.1	2.0	2.2	51
31	7.0	---	2.1	1.7	---	2.1	---	46	---	2.0	2.4	---
TOTAL	2791.0	71.5	66.1	59.6	48.0	57.4	1931.2	1816	1006.0	66.6	65.2	1153.1
MEAN	90.0	2.38	2.13	1.92	1.71	1.85	64.4	58.6	33.5	2.15	2.10	38.4
MAX	139	5.0	2.2	2.0	1.8	2.1	187	159	48	4.6	2.4	73
MIN	7.0	2.1	2.0	1.7	1.7	1.7	1.5	44	2.1	1.9	2.0	2.4
AC-FT	5540	142	131	118	95	114	3830	3600	2000	132	129	2290

CAL YR 1977 TOTAL 11258.5 MEAN 30.8 MAX 139 MIN 1.3 AC-FT 22330
WTR YR 1978 TOTAL 9131.7 MEAN 25.0 MAX 187 MIN 1.5 AC-FT 18110

09163340 MACK WASH NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURES: July 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 5,450 micromhos July 14, 1975; minimum, 788 micromhos Aug. 3, 1975.
WATER TEMPERATURES: Maximum, 26.0°C July 22, 24, 1976; minimum, 1.5°C Feb. 17-19, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 5,350 micromhos Aug. 7; minimum, 798 micromhos June 9.
WATER TEMPERATURES: Maximum, 22.5°C June 20; minimum, 1.5°C Feb. 17-19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
18...	1345	98	1225	8.3	14.0	9.0	330	190	95
FEB									
14...	0820	1.8	3500	7.5	9.5	7.4	2000	1800	550
APR									
03...	1145	1.7	3700	7.5	13.5	8.0	1900	1700	520
JUL									
14...	0850	2.0	3700	7.8	14.0	6.5	1800	1600	480

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)
OCT									
18...	23	150	3.6	4.8	170	0	140	240	190
FEB									
14...	150	240	2.3	7.0	260	0	210	1900	200
APR									
03...	150	230	2.3	6.6	260	0	210	1900	200
JUL									
14...	150	240	2.5	7.1	270	0	220	1800	190

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT									
18...	.4	8.0	796	1.08	211	.18	.01	0	0
FEB									
14...	.3	11	3200	4.35	15.6	2.3	.01	10	70
APR									
03...	.2	10	3150	4.28	14.8	2.0	.01	30	70
JUL									
14...	.3	11	3020	4.11	16.6	2.6	.02	70	80

09163340 MACK WASH NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	3330	3710	3470	3480	3530	3660	1000	920	3570	3530	2380
2	1270	3500	3700	3480	3470	3520	3670	1100	920	3400	3520	2290
3	1260	3560	3680	3480	3480	3520	3700	1100	900	2230	3480	2380
4	1240	3600	3660	3120	3480	3550	3710	1080	884	2610	3490	2370
5	1250	3650	3640	2960	3480	3550	3700	1090	868	3200	3680	2390
6	1250	3600	3610	3010	3470	3560	3690	1080	854	3450	4150	2180
7	1200	3310	3580	3060	3470	3570	3690	1060	865	3600	4690	2330
8	1220	3270	3610	3110	3460	3580	3670	1060	869	3650	3520	2290
9	1220	3490	3630	3170	3480	3590	3650	1060	847	3660	3150	2510
10	1210	3700	3660	3230	3490	3590	3640	1050	886	3670	3750	2590
11	1210	3830	3690	3290	3470	3600	3670	1060	939	3660	4450	1880
12	1220	3900	3710	3350	3480	3600	3620	1080	955	3380	4090	1050
13	1260	3950	3740	3410	3490	3610	3610	1070	976	3400	3890	1050
14	1280	4020	3770	3470	3490	3610	3610	1060	1010	3630	3630	1050
15	1240	4000	3780	3530	3480	3620	3600	1050	1020	3590	3650	1050
16	1230	3980	3790	3590	3480	3630	3580	1070	1070	3580	4340	1050
17	1220	3970	3840	3580	3480	3640	3570	1060	1090	3550	3380	1050
18	1220	3960	3870	3560	3480	3650	2630	1030	1140	3520	3400	1150
19	1260	3940	3700	3540	3480	3660	1630	1070	1150	3520	3450	1200
20	1300	3920	3480	3530	3500	3640	1490	1070	1570	3510	3500	1540
21	1330	3900	3470	3530	3500	3610	1420	1110	2050	3510	3600	1530
22	1350	3890	3470	3520	3510	3580	1170	1080	2500	3490	3700	1510
23	1360	3880	3470	3510	3510	3600	1070	1020	3030	3480	3800	1500
24	1380	3860	3470	3510	3510	3610	1050	1010	3360	3470	3700	1470
25	1510	3840	3470	3510	3510	3620	1000	1010	3470	3320	3600	1440
26	1610	3820	3470	3500	3520	3640	1000	1000	3470	3400	3400	1420
27	1900	3800	3470	3500	3530	3640	1000	1020	3220	3440	3200	1410
28	2260	3780	3480	3500	3530	3660	1000	998	3450	3480	2870	1410
29	2610	3760	3480	3490	---	3670	1000	964	3520	3500	2920	1410
30	2840	3740	3480	3490	---	3670	1000	938	3560	3500	2810	1410
31	3110	---	3470	3490	---	3680	---	920	---	3530	2530	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	16.5	13.5	9.5	10.5	8.5	10.5	8.0	11.5	8.5	10.5	9.5
2	17.5	16.5	13.5	9.5	12.0	9.0	9.5	7.5	10.5	8.5	12.0	10.0
3	17.0	16.0	14.0	9.5	11.5	9.5	10.5	8.5	11.5	8.5	11.0	9.5
4	17.0	16.0	14.5	9.5	12.0	10.0	10.0	8.5	12.0	8.5	13.0	9.0
5	17.0	16.0	14.0	10.5	12.0	9.0	11.0	9.0	10.5	8.5	12.0	9.5
6	17.0	16.5	12.0	10.5	11.5	8.5	10.5	9.0	10.5	8.5	13.0	9.5
7	16.5	15.5	13.0	10.5	10.5	8.5	10.0	8.5	10.5	8.5	14.5	9.0
8	16.5	15.5	11.5	9.0	11.5	8.5	10.5	8.0	11.0	8.5	14.0	9.0
9	17.0	15.5	12.0	8.5	11.0	8.5	10.5	8.5	10.0	8.5	13.5	9.0
10	16.0	15.0	12.5	8.5	11.5	9.0	10.0	9.0	12.0	9.0	12.5	9.5
11	15.5	15.0	12.5	9.0	11.5	8.5	10.0	9.5	10.0	8.5	12.0	9.0
12	15.0	14.5	13.5	9.5	11.5	9.5	10.0	9.0	12.0	8.0	11.0	9.5
13	14.5	13.5	13.0	9.0	11.5	8.5	11.0	8.5	11.5	8.0	12.5	9.0
14	14.5	14.0	13.0	9.0	12.0	9.0	10.5	8.5	12.0	2.5	12.5	8.5
15	14.5	14.0	13.0	9.5	12.0	9.0	10.0	8.5	11.0	2.0	14.0	8.0
16	14.0	13.5	13.0	9.0	10.0	8.5	11.5	8.5	12.0	2.0	14.5	8.0
17	14.0	13.0	12.0	9.5	10.5	8.0	11.0	9.0	12.0	1.5	15.0	8.5
18	14.5	13.5	12.0	10.0	10.0	8.5	11.0	9.0	11.5	1.5	15.0	8.5
19	14.0	13.0	12.0	9.5	10.5	8.5	10.0	9.0	12.0	1.5	12.5	9.5
20	14.0	12.5	11.0	8.5	10.0	8.0	10.5	9.0	12.0	2.5	16.0	10.0
21	13.5	12.5	10.5	8.5	9.5	7.5	10.5	9.0	13.0	2.0	16.0	9.0
22	14.0	12.5	11.5	9.5	10.0	8.5	10.5	9.0	13.0	2.0	12.0	9.5
23	13.5	12.5	12.5	9.0	9.5	8.0	9.5	8.5	13.5	2.0	15.5	9.5
24	13.0	12.5	11.5	9.0	11.0	8.0	11.5	8.0	13.5	2.0	15.0	9.5
25	14.0	12.5	12.5	9.5	10.5	8.0	10.5	---	12.0	8.5	15.5	9.0
26	14.0	12.5	13.0	9.5	10.5	8.0	10.5	8.0	12.0	9.5	16.0	9.0
27	14.5	12.0	10.5	9.5	10.0	9.0	10.5	8.5	12.5	9.5	16.5	9.5
28	14.5	11.5	11.0	9.5	11.0	9.5	10.5	8.0	14.0	9.0	16.5	10.0
29	14.0	11.5	11.5	9.0	10.0	9.0	10.0	7.5	---	---	17.0	9.5
30	14.5	10.5	11.5	9.0	10.5	9.5	10.0	7.5	---	---	15.5	9.5
31	11.5	10.0	---	---	11.0	8.5	10.0	8.0	---	---	16.5	10.0

09163340 MACK WASH NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	10.0	16.0	12.5	20.0	16.5	20.0	12.0	---	---	19.5	---
2	13.5	9.5	15.0	13.0	18.5	16.5	20.0	12.0	---	---	18.5	---
3	15.5	9.5	15.5	13.0	19.5	16.5	21.5	---	---	---	18.5	---
4	16.0	9.5	15.0	14.0	20.0	18.0	20.5	---	19.5	---	18.0	---
5	15.0	9.5	14.0	13.0	20.0	18.0	20.0	12.5	19.5	---	18.5	---
6	16.5	9.5	14.0	13.0	20.5	18.0	19.5	12.0	19.5	---	18.0	---
7	16.0	10.0	14.5	12.0	20.0	18.0	20.0	12.0	16.5	---	12.0	---
8	15.5	10.0	14.0	12.5	20.5	18.5	19.5	12.0	---	---	18.0	---
9	11.0	9.5	15.0	12.5	21.5	17.5	19.5	12.0	---	---	18.5	---
10	16.5	9.0	14.5	12.0	20.5	17.0	19.5	13.0	---	---	17.5	---
11	16.5	9.0	15.5	12.0	20.5	18.5	19.5	13.5	15.0	---	20.5	---
12	17.0	9.5	15.0	---	20.5	18.5	19.5	13.0	11.5	---	20.5	---
13	15.0	9.5	17.5	---	21.5	18.0	20.0	12.0	14.5	---	20.5	---
14	16.5	10.0	17.5	---	20.5	18.0	20.0	12.5	---	---	19.5	---
15	17.0	10.0	17.5	---	20.5	18.0	18.0	13.0	---	---	19.5	---
16	14.5	9.5	17.5	---	20.5	18.5	19.5	13.0	16.0	---	20.0	---
17	14.5	9.0	8.0	---	21.0	---	20.0	13.5	8.0	7.5	20.0	---
18	14.0	8.5	15.5	---	21.0	---	20.0	13.0	---	---	18.0	---
19	12.5	11.5	18.5	---	20.5	---	20.0	13.0	---	---	18.0	---
20	12.5	11.0	19.5	---	22.5	---	19.0	13.0	---	---	18.0	16.5
21	12.5	10.0	18.5	16.5	21.5	---	20.0	13.5	---	---	17.5	16.5
22	11.5	11.0	20.0	16.0	21.0	---	20.0	12.5	---	---	17.5	16.0
23	12.0	11.0	18.0	---	20.5	---	20.0	12.0	19.0	---	17.5	16.0
24	13.5	11.5	16.5	---	20.0	13.0	20.5	12.5	19.5	---	18.0	16.5
25	13.5	11.5	18.0	---	19.0	12.0	20.5	14.0	19.0	---	18.0	16.5
26	13.5	11.5	18.5	---	19.5	11.5	---	---	19.0	---	18.0	16.5
27	13.5	12.5	18.5	---	18.5	13.0	---	---	19.0	---	18.0	16.5
28	14.5	13.0	19.0	---	16.0	12.5	---	---	18.5	---	18.5	16.5
29	14.5	13.0	19.0	---	14.0	12.5	---	---	19.0	---	18.0	---
30	14.5	13.5	18.5	16.5	20.0	12.0	---	---	18.5	---	18.5	---
31	---	---	18.5	17.0	---	---	---	---	18.5	---	---	---

09163490 SALT CREEK NEAR MACK, CO

LOCATION.--Lat 39°13'18", long 108°53'32", in NE¼NW¼ sec.4, T.10 S., R.103 W., Sixth Principal Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 800 ft (240 m) downstream from bridge on Interstate Highway 70, 1.4 mi (2.3 km) west of Mack, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--436 mi^2 (1,129 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,440 ft (1,353 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Flow is mostly return flow and waste water from lands irrigated under the Government Highline Canal. Some regulation by many small detention reservoirs and stock ponds on tributaries above station and by Highline Lake, capacity, 3,400 acre-ft (4.19 hm^3) on Mack Wash above station. A few small diversions for irrigation by hay meadows above station.

AVERAGE DISCHARGE.--5 years, 87.8 ft^3/s (2.486 m^3/s), 63,610 acre-ft/yr (78.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft^3/s (44.7 m^3/s) Aug. 8, 1974, gage height, 5.57 ft (1.698 m), from rating curve extended above 240 ft^3/s (6.8 m^3/s), on basis of slope-area measurement at gage height 5.69 ft (1.734 m); minimum daily, 4.2 ft^3/s (0.12 m^3/s) Jan. 24, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage of 5.69 ft (1.73 m) Sept. 19, 1972, from floodmarks, discharge, 1,680 ft^3/s (47.6 m^3/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft^3/s (36.2 m^3/s) at 2300 Oct. 6, gage height, 5.15 ft (1.570 m); minimum daily, 8.8 ft^3/s (0.25 m^3/s) Feb. 22-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	41	15	12	11	9.8	15	190	187	113	110	118
2	211	40	14	12	11	15	26	170	187	109	110	116
3	207	40	14	12	11	76	40	160	189	130	110	118
4	210	40	14	12	11	14	24	130	187	111	110	118
5	208	40	14	12	11	43	21	130	194	107	112	116
6	285	94	14	12	11	23	21	140	199	103	109	116
7	344	71	14	12	11	14	25	150	173	99	107	115
8	194	44	14	12	11	12	31	170	162	118	105	118
9	206	35	15	12	11	13	36	170	169	92	108	120
10	205	30	14	12	11	13	28	160	169	94	110	120
11	205	27	14	12	11	13	31	150	153	120	110	120
12	208	23	14	12	11	17	35	140	155	92	110	120
13	212	21	14	11	11	15	36	130	153	90	105	140
14	221	18	15	11	11	11	36	120	148	92	105	160
15	223	18	15	11	11	9.5	39	130	148	97	102	190
16	236	17	15	11	11	9.1	41	140	144	94	100	185
17	240	17	15	12	11	9.0	40	216	139	92	102	170
18	240	17	15	12	10	10	110	218	139	94	110	150
19	236	18	15	12	10	12	210	204	137	90	110	160
20	219	19	14	12	9.6	12	240	196	122	90	110	180
21	209	17	14	12	9.1	19	250	187	120	71	110	200
22	208	17	14	12	8.8	18	240	199	105	88	140	220
23	208	17	14	12	8.8	16	220	206	101	90	160	220
24	174	16	14	12	8.8	12	220	208	97	91	120	220
25	92	15	14	12	8.8	10	220	206	74	93	120	240
26	84	14	14	12	8.8	10	230	196	99	95	120	230
27	62	15	14	11	8.8	10	240	189	92	99	120	210
28	53	16	14	11	9.4	10	240	189	88	97	120	200
29	50	15	14	11	---	10	250	192	97	105	120	190
30	52	15	13	11	---	11	240	189	90	105	120	170
31	47	---	13	11	---	11	---	192	---	108	120	---
TOTAL	5766	827	440	363	287.9	487.4	3435	5367	4217	3069	3525	4850
MEAN	186	27.6	14.2	11.7	10.3	15.7	115	173	141	99.0	114	162
MAX	344	94	15	12	11	76	250	218	199	130	160	240
MIN	47	14	13	11	8.8	9.0	15	120	74	71	100	115
AC-FT	11440	1640	873	720	571	967	6810	10650	8360	6090	6990	9620

CAL YR 1977 TOTAL 35843.6 MEAN 98.2 MAX 344 MIN 8.0 AC-FT 71100
WTR YR 1978 TOTAL 32634.3 MEAN 89.4 MAX 344 MIN 8.8 AC-FT 64730

NOTE.--NO GAGE-HEIGHT RECORD JAN. 5 TO FEB. 9, MAR. 20 TO MAY 16, AUG. 23 TO SEPT. 30.

09163490 SALT CREEK NEAR MACK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to current year.
WATER TEMPERATURES: April 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1973.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,760 micromhos Jan. 8, 1977; minimum, 644 micromhos May 16, 1978.
WATER TEMPERATURES: Maximum, 36.5°C July 17, 1976; minimum, freezing point on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 5,540 micromhos Nov. 26; minimum, 644 micromhos May 16.
WATER TEMPERATURES: Maximum, 29.0°C July 14, 24; minimum, 0.5°C Feb. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT									
19...	1115	245	1700	8.3	11.5	9.6	580	420	150
FEB									
14...	1130	11	4900	8.2	5.0	12.4	2500	2200	490
APR									
05...	0845	21	3930	7.3	8.5	13.2	1700	1500	350
JUL									
11...	0830	109	1700	7.6	17.0	7.6	800	640	200

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)
OCT									
19...	51	170	3.1	5.2	200	0	160	510	200
FEB									
14...	300	440	3.9	10	340	0	280	2700	260
APR									
05...	210	400	4.2	7.4	340	0	280	1900	150
JUL									
11...	73	140	2.2	4.8	200	0	160	730	110

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT									
19...	.3	7.5	1200	1.63	794	.88	.01	--	20
FEB									
14...	.3	10	4400	5.98	133	4.9	.00	10	180
APR									
05...	.2	10	3210	4.37	182	3.0	.04	30	60
JUL									
11...	.3	8.7	1380	1.88	406	2.6	.03	50	20

09163490 SALT CREEK NEAR MACK, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2070	4170	5300	4800	4880	4880	3960	1150	1090	1360	1700	1980
2	2110	4220	5300	4700	4770	4800	3840	1150	1120	1420	1750	1970
3	2160	4390	5200	4700	4820	1840	3910	1170	1150	1450	1790	1960
4	2210	4450	5100	4700	4930	1730	3900	1160	1180	1500	1740	1950
5	2250	4490	5000	4700	5000	1820	3900	1150	1220	1530	1820	1940
6	2270	3850	5100	4700	4720	2650	3900	1140	1260	1570	1750	1960
7	1910	3100	5100	4700	4710	2660	3800	1160	1050	1660	1750	1930
8	1580	3730	5200	4700	5000	2790	3700	1150	865	1650	1760	1950
9	1620	4010	5200	4600	5000	2870	3900	1150	878	1690	1790	1920
10	1650	4150	5100	4600	5000	3010	4000	1140	903	1680	1790	1900
11	1680	4240	5100	4600	5000	3120	4000	1190	956	1390	1790	1880
12	1710	4300	5000	4600	5000	3190	3900	1040	985	1400	1800	1900
13	1770	4360	5000	4600	5000	3170	3800	1080	1020	1600	1810	1860
14	1740	4400	5100	4600	5000	3250	3900	1110	1070	1650	1800	1840
15	1790	4520	5100	4600	5160	3360	4000	1110	1110	1700	1820	1860
16	1740	4610	5000	4600	5020	3460	3900	878	1160	1700	1810	1850
17	1730	4670	5000	4700	5000	3620	3900	667	1200	1750	1830	1820
18	1710	4770	5000	4600	4980	3800	2000	667	1240	1700	1820	1800
19	1720	4850	5000	4800	4980	3840	1640	682	1250	1700	1850	1750
20	1790	4970	5000	4700	4940	3820	1600	719	1350	1750	1840	1750
21	1850	5000	5000	4900	4960	3740	1570	754	1460	1750	1890	1750
22	1930	5100	5000	4800	4960	3560	1660	790	1440	1750	2000	1750
23	2000	5270	5000	4900	4960	3700	1580	824	1100	1750	2000	1750
24	2140	5440	5000	4800	4980	3810	1580	852	1110	1750	2000	1800
25	2780	5450	4900	4700	4900	3890	1610	865	1150	1700	2000	1800
26	2920	5360	4900	4900	4910	4010	1510	900	1160	1700	2000	1800
27	3400	5210	4900	4800	4900	4150	1450	927	1370	1750	1990	1850
28	3720	5200	4900	4900	4910	4230	1250	951	1400	1750	1990	1900
29	3850	5200	4800	4900	---	4080	1190	988	1390	1700	1980	1950
30	3940	5300	4800	4900	---	4010	1220	1030	1360	1700	1980	2000
31	4000	---	4800	4920	---	4030	---	1050	---	1700	1990	---

09163490 SALT CREEK NEAR MACK, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	12.0	10.5	6.0	5.0	1.0	---	---	7.5	.5	8.5	7.5
2	19.0	12.0	10.5	4.5	7.0	2.0	---	---	6.5	---	15.5	7.5
3	19.5	12.5	11.5	5.0	7.0	3.5	---	---	8.0	---	13.0	---
4	19.5	14.0	12.0	5.5	8.0	5.0	---	---	8.0	---	10.0	---
5	20.0	15.5	13.0	7.0	8.0	3.0	---	---	6.0	---	10.0	---
6	17.5	15.0	10.5	9.0	5.5	---	6.5	---	---	---	11.5	---
7	18.0	14.5	12.5	8.5	4.0	---	5.5	3.0	---	---	14.0	5.0
8	17.5	12.0	9.5	5.5	5.5	---	6.0	2.5	7.0	---	13.5	5.0
9	17.0	12.0	8.0	3.0	3.5	---	5.5	1.5	7.5	---	13.5	5.5
10	17.0	12.0	8.0	2.5	5.0	---	5.5	4.0	9.5	---	11.0	6.5
11	16.0	10.0	8.5	3.0	4.5	---	6.5	5.0	5.5	---	11.0	6.0
12	15.5	9.5	10.0	5.0	6.0	---	6.5	5.0	---	---	9.0	7.0
13	15.5	9.5	9.0	4.0	5.5	---	7.5	3.5	---	---	10.0	6.0
14	16.0	10.0	9.5	4.0	6.0	---	6.0	2.0	---	---	11.5	5.5
15	16.5	10.5	10.0	5.0	6.5	---	5.0	3.0	8.0	---	11.0	3.0
16	16.5	10.5	9.5	4.0	4.5	---	---	---	9.0	2.5	12.5	2.5
17	16.5	10.5	8.5	4.5	3.0	---	---	---	8.5	1.0	15.0	3.5
18	16.5	10.5	9.0	6.5	1.5	---	---	---	7.0	---	15.0	5.0
19	16.0	10.5	10.0	6.0	3.5	---	---	---	8.0	1.0	12.0	7.5
20	15.5	12.0	6.5	2.5	---	---	---	---	9.0	2.5	17.5	8.5
21	16.0	12.0	---	---	---	---	---	---	10.0	1.5	17.0	7.0
22	16.5	11.0	---	---	---	---	---	---	10.0	1.5	11.0	8.5
23	15.5	10.0	---	---	---	---	---	---	10.5	1.5	15.5	7.0
24	15.0	11.5	8.0	4.5	---	---	---	---	10.5	1.5	15.0	9.0
25	16.0	9.5	10.0	5.0	---	---	---	---	9.0	3.5	16.5	6.0
26	16.0	9.0	9.5	4.0	---	---	---	---	10.0	5.5	17.5	5.5
27	15.0	8.5	6.5	4.0	---	---	---	---	11.5	6.5	19.0	6.5
28	14.5	8.5	7.0	4.0	---	---	---	---	13.5	5.5	20.0	8.0
29	13.5	9.0	6.0	2.0	---	---	---	---	---	---	20.0	7.5
30	15.0	9.5	7.0	2.0	---	---	---	---	---	---	18.0	7.5
31	9.0	7.0	---	---	---	---	---	---	---	---	20.0	9.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	11.5	17.5	10.5	23.0	12.0	27.0	16.0	---	---	23.5	---
2	11.5	9.0	20.0	10.0	22.5	13.0	26.0	15.0	---	---	24.0	---
3	16.0	8.0	18.5	12.5	23.5	13.5	25.0	14.5	---	---	27.0	---
4	16.0	8.5	16.0	11.0	24.5	15.0	25.0	14.0	27.5	17.5	---	---
5	18.5	---	13.0	9.0	21.5	14.5	26.0	13.5	27.5	17.0	---	---
6	20.0	---	12.5	8.0	23.0	13.5	26.0	16.0	---	---	---	---
7	19.0	---	16.0	9.0	23.0	15.0	27.0	15.5	---	---	---	---
8	16.5	---	15.5	8.5	24.5	14.5	26.0	15.5	---	---	---	---
9	---	---	19.0	8.5	25.5	15.0	27.0	16.0	---	---	---	---
10	17.5	---	20.0	10.0	22.5	16.0	27.0	18.5	---	---	---	---
11	20.0	---	18.5	11.5	24.5	15.0	25.0	18.5	---	---	---	---
12	19.0	---	21.0	10.0	24.5	14.0	27.5	18.0	---	---	---	---
13	16.0	---	22.5	10.5	25.0	14.5	28.0	16.5	---	---	---	---
14	19.5	---	22.5	12.0	23.5	14.0	29.0	17.0	---	---	---	---
15	19.0	---	22.0	13.0	24.5	14.5	24.0	18.5	---	---	---	---
16	---	---	20.5	13.5	24.5	14.0	27.5	18.5	---	---	---	---
17	---	---	16.0	12.0	25.0	14.5	26.5	19.5	---	---	---	---
18	16.5	---	19.0	9.5	24.0	14.0	28.5	18.0	---	---	---	---
19	15.5	---	21.0	10.0	24.5	15.5	28.0	18.5	---	---	---	---
20	17.5	---	22.0	11.5	26.0	14.0	28.5	19.5	---	---	---	---
21	---	---	20.5	14.5	26.0	15.5	26.5	19.0	---	---	17.5	9.5
22	---	---	22.5	12.0	26.0	15.5	28.0	17.0	---	---	18.0	10.0
23	16.5	---	20.5	13.5	26.5	15.5	28.0	17.0	25.0	15.5	19.5	11.5
24	17.5	9.5	21.0	12.0	27.5	17.0	29.0	17.5	24.5	15.0	18.5	13.0
25	17.5	12.0	20.0	12.0	25.5	16.5	---	---	24.0	16.0	20.0	13.5
26	17.5	11.0	22.0	11.0	26.5	14.5	---	---	25.5	15.5	20.0	13.5
27	17.0	11.5	22.0	13.0	25.0	15.5	---	---	23.5	14.5	20.0	13.5
28	17.0	10.5	23.0	13.0	22.0	17.0	---	---	24.0	15.0	20.5	13.5
29	16.5	11.0	23.5	12.5	22.0	16.5	---	---	23.5	15.5	20.5	14.0
30	18.5	11.0	23.5	14.0	26.5	16.0	---	---	23.0	15.0	20.0	13.0
31	---	---	20.5	13.5	---	---	---	---	22.5	---	---	---

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE

LOCATION.--Lat 39°10'00", long 108°57'26", in SE¼SE¼ sec.23, T.10 S., R.104 W., Mesa County, Hydrologic unit 14010005, on right bank 4.8 mi (7.7 km) downstream from Salt Creek, 6.3 mi (10.1 km) southwest of Mack, Colo., and 7.2 mi (11.6 km) upstream from Colorado-Utah State line.

DRAINAGE AREA.--17,764 mi² (46,009 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,365 ft (1,330 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation. (Records include all return flow from irrigated areas.)

AVERAGE DISCHARGE.--27 years, 5,660 ft³/s (160.3 m³/s), 4,101,000 acre-ft/yr (5,060 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,800 ft³/s (1,610 m³/s) June 9, 1957, gage height, 16.40 ft (4.999 m); minimum daily, 960 ft³/s (27.2 m³/s) Sept. 7, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,800 ft³/s (787 m³/s) at 0930 June 17, gage height, 11.07 ft (3.374 m); minimum daily, 1,680 ft³/s (47.6 m³/s) Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	2310	2360	2380	2410	2620	3720	6960	16000	16200	3600	2050
2	1890	2640	2310	2100	2360	2880	5700	6750	16000	14600	3090	2060
3	1890	2470	2200	1790	2330	3490	5350	6330	16600	13500	2930	2160
4	1930	2380	2220	1800	2220	3150	4740	6450	16600	12600	2760	2170
5	1920	2410	2330	2020	2300	3060	4480	6900	17200	11700	2550	2250
6	1930	2520	2250	2310	2380	3330	4380	6930	16200	10400	2460	2360
7	2660	2620	2180	2330	2460	3220	4530	6870	15400	9030	2310	2440
8	2840	2440	2160	2230	2540	2910	4650	6570	16400	8160	2120	3220
9	2740	2420	2200	2050	2570	2760	5350	6030	16800	7560	2060	2910
10	2590	2410	2280	1990	2490	2600	6240	5500	18300	7560	1860	2710
11	2470	2310	2080	2180	2550	2500	5450	5450	21800	8160	2000	2930
12	2340	2280	2170	2440	2620	2700	4820	6000	24500	8070	2350	3000
13	2330	2410	2200	2440	2470	2650	5100	6660	24400	7890	2340	3000
14	2310	2330	2200	2380	2420	2450	5550	7770	25100	7500	2690	3090
15	2250	2300	2170	2340	2380	2300	5420	9900	26100	6900	2720	3170
16	2220	2280	2300	2380	2340	2450	5680	13400	26400	6540	2850	3300
17	2180	2250	2500	2520	2330	2500	5480	16700	27200	6870	2780	3260
18	2170	2220	2260	2440	2260	2580	5550	18600	24500	7650	2620	3200
19	2100	2260	2050	2410	2110	2600	5080	15600	21700	7980	2550	3180
20	1960	2390	2060	2420	2170	2620	4770	13500	20600	7980	2440	3450
21	1930	2380	1790	2340	2280	2650	4670	13300	20100	7650	2300	3620
22	1990	2100	1680	2390	2330	2740	5080	14800	19100	7140	2250	3760
23	2080	2050	1690	2390	2340	3180	4670	15900	19100	6870	2360	3760
24	2340	2360	1800	2410	2330	3090	4340	17000	19400	6420	2300	3600
25	2260	2360	2250	2340	2340	2990	4430	18400	19500	5700	2390	3500
26	2220	2340	2310	2220	2340	2860	5030	18400	20200	4670	2410	3300
27	2140	2380	2280	2260	2420	2760	5910	17500	18400	4240	2260	3320
28	2140	2390	2250	2390	2620	2830	7410	17400	16100	3890	2380	3320
29	2110	2500	2260	2330	---	2880	7200	15700	15400	3600	2260	3200
30	2110	2390	2310	2200	---	3080	7020	15000	15700	3560	2120	2990
31	2170	---	2420	2300	---	3320	---	15600	---	3620	2080	---
TOTAL	68130	70900	67520	70520	66710	87750	157800	357870	590800	244210	76210	90280
MEAN	2198	2363	2178	2275	2383	2831	5260	11540	19690	7878	2458	3009
MAX	2840	2640	2500	2520	2620	3490	7410	18600	27200	16200	3600	3760
MIN	1890	2050	1680	1790	2110	2300	3720	5450	15400	3560	1860	2050
AC-FT	135100	140600	133900	139900	132300	174100	313000	709800	1172000	484400	151200	179100

CAL YR 1977 TOTAL 807470 MEAN 2212 MAX 4720 MIN 1050 AC-FT 1602000
WTR YR 1978 TOTAL 1948700 MEAN 5339 MAX 27200 MIN 1680 AC-FT 3865000

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE
(National stream-quality accounting network station)

LOCATION.--Lat 39°05'18", long 109°06'01" in NE¼NW¼ sec.12, T.20 S., R.25 E., Grand County, Hydrologic Unit 14030001, on right bank 0.3 mi (0.5 km) downstream from Bitter Creek, 1.0 mi (1.6 km) northeast of Westwater, UT, and 4.0 mi (6.4 km) downstream from Colorado-Utah State line.

DRAINAGE AREA.--18,034 mi² (46,708 km²).

PERIOD OF RECORD.--May 1962 to June 1969, October 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1962 to June 1969, October 1972 to current year.
WATER TEMPERATURES: May 1962 to June 1969, October 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1972.

REMARKS.--Records of discharge given for Colorado River near Colorado-Utah State line (station 09163500). Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 5,140 micromhos Mar. 17, 1969; minimum, 357 micromhos June 22, 1965.
WATER TEMPERATURES: Maximum, 28.0°C July 30, 1966, July 13, 1968; minimum, freezing point on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,220 micromhos Oct. 31; minimum, 365 micromhos June 17.
WATER TEMPERATURES: Maximum, 25.5°C Aug. 11; minimum, freezing point several days during January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 18...	0945	E2000	1600	7.6	12.5	70	9.2	--	K150	620
NOV 30...	0930	E3000	1500	7.5	4.0	35	11.0	K25	K5	540
DEC 15...	0915	E3000	1680	8.4	3.0	15	12.0	K5	100	520
JAN 13...	0930	E3000	1450	7.5	3.0	20	10.2	K20	250	480
FEB 24...	0945	E3000	1270	7.7	5.0	90	10.2	<1	K160	430
MAR 21...	0945	E3500	1250	7.3	12.0	650	8.8	<1	360	410
APR 05...	1100	E3500	925	7.9	11.0	550	11.8	740	1000	300
MAY 03...	1130	E5000	680	7.5	15.0	290	8.6	K100	760	250
JUN 07...	1100	E16700	420	7.7	17.0	100	7.6	K150	450	190
JUL 12...	0900	9000	700	8.1	20.5	270	7.2	--	K92	300
AUG 01...	1130	3500	1150	8.3	24.0	45	7.2	K280	K240	420
SEP 20...	1145	E2300	1300	7.6	14.0	39	8.4	220	650	530

E ESTIMATED.

K BASED ON NON-IDEAL COLONY COUNT.

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT 18...	440	160	54	150	2.6	5.3	220	0	180	570
NOV 30...	350	140	47	150	2.8	5.2	230	0	190	440
DEC 15...	340	130	48	190	3.6	5.1	220	0	180	500
JAN 13...	310	120	43	150	3.0	4.9	200	0	160	430
FEB 24...	260	110	37	140	2.9	4.6	200	0	160	320
MAR 21...	250	100	38	150	3.2	5.1	190	0	160	340
APR 05...	170	74	28	89	2.2	3.8	160	0	130	260
MAY 03...	130	66	21	55	1.5	3.2	150	0	120	170
JUN 07...	88	50	15	32	1.0	1.8	120	0	98	130
JUL 12...	200	89	18	50	1.3	2.4	--	--	100	210
AUG 01...	280	110	36	100	2.1	3.9	--	--	140	350
SEP 20...	360	140	43	120	2.3	4.8	--	--	170	470

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 18...	140	.5	10	1240	1200	1.69	6700	1.2	.02
NOV 30...	150	.4	10	1140	1060	1.55	9230	1.2	.06
DEC 15...	160	.5	9.5	1120	1150	1.52	9070	1.2	.12
JAN 13...	150	.4	12	1050	1010	1.43	8510	1.2	.01
FEB 24...	150	.4	9.2	909	870	1.24	7360	.71	.05
MAR 21...	140	.4	8.9	894	876	1.22	8450	.74	.10
APR 05...	68	.3	10	622	612	.85	5880	1.2	.00
MAY 03...	49	.2	11	475	449	.65	6410	.75	.03
JUN 07...	21	.2	10	310	319	.42	14000	.42	.01
JUL 12...	50	.3	9.8	499	490	.68	12100	.47	.00
AUG 01...	87	.4	9.0	809	780	1.10	7650	.62	.00
SEP 20...	110	.5	12	1040	1000	1.41	6460	1.1	.06

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 18...	--	--	.60	--	.13	.03	--	3.6	1.4
NOV 30...	--	--	.29	--	.04	.00	3.2	--	--
DEC 15...	--	--	.35	--	.02	.01	2.5	--	--
JAN 13...	--	--	.54	--	.06	.02	--	3.7	--
FEB 24...	.46	.51	.23	1.2	.11	.03	3.2	--	--
MAR 21...	1.7	1.8	.36	2.5	.89	.03	30	--	--
APR 05...	2.0	2.0	1.4	3.2	.75	.01	--	5.6	3.3
MAY 03...	.97	1.0	.89	1.8	.46	.01	16	--	--
JUN 07...	.89	.90	.54	1.3	.18	.02	6.6	--	--
JUL 12...	1.8	1.8	.61	2.3	.45	.02	--	4.9	2.6
AUG 01...	.49	.49	.30	1.1	.11	.02	4.8	--	--
SEP 20...	.76	.82	.74	1.9	.10	.02	9.7	--	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)
OCT 18...	0945	--	1	--	200	--	1	--	0
JAN 13...	0930	1	1	0	0	0	1	0	10
APR 05...	1100	5	3	600	100	3	1	10	0
JUL 12...	0900	2	1	300	200	2	3	10	0

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
OCT 18...	--	0	--	3	--	30	--	1	--
JAN 13...	1	0	13	2	1100	40	5	0	60
APR 05...	10	0	32	3	18000	80	24	4	490
JUL 12...	6	1	16	3	7800	40	18	2	180

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 18...	20	--	.0	--	12	--	0	--	10
JAN 13...	40	.1	.0	11	11	0	0	30	0
APR 05...	10	.0	.0	4	3	0	0	110	10
JUL 12...	0	.0	.0	6	5	0	0	70	0

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	890	1450	1550	1660	1250	1130	1210	718	485	491	1140	1280
2	851	1310	1600	1590	1250	1170	1210	737	486	498	1110	1320
3	813	1260	1650	1540	1250	1170	1100	735	479	519	1110	1330
4	800	1430	1700	1440	1260	1200	969	747	477	529	1150	1340
5	924	1540	1700	1350	1260	1240	766	730	467	552	1220	1340
6	1040	1660	1700	1360	1250	1270	608	721	482	585	1230	1340
7	948	1710	1700	1390	1250	1290	639	736	503	611	1250	1340
8	1440	1290	1650	1310	1270	1300	672	760	501	667	1280	1310
9	1570	1440	1650	1310	1270	1320	700	784	483	695	1300	1330
10	1700	1520	1650	1360	1270	1330	730	790	472	719	1320	1350
11	1790	1570	1650	1430	1270	1350	760	800	443	749	1350	1360
12	1880	1620	1600	1460	1250	1360	785	816	405	773	1370	1340
13	1770	1710	1600	1460	1270	1370	805	847	393	765	1320	1320
14	1660	1800	1600	1390	1270	1380	825	849	386	768	1230	1300
15	1630	1920	1550	1390	1250	1390	837	679	377	791	1210	1300
16	1620	1800	1550	1380	1250	1350	842	610	377	810	1190	1290
17	1610	1800	1550	1320	1250	1300	838	615	372	833	1190	1280
18	1600	1750	1550	1310	1250	1300	815	499	380	834	1190	1270
19	1610	1750	1550	1290	1250	1250	797	485	405	825	1200	1280
20	1630	1700	1570	1270	1210	1250	819	500	424	805	1200	1290
21	1630	1700	1540	1240	1240	1370	831	509	426	791	1220	1250
22	1640	1650	1490	1230	1260	1330	825	519	435	812	1270	1220
23	1670	1650	1510	1210	1270	1290	797	518	435	821	1310	1200
24	1790	1650	1560	1200	1200	1240	795	492	424	831	1260	1190
25	2000	1600	1720	1310	1070	1240	792	468	421	861	1230	1190
26	2000	1600	1740	1390	1030	1230	759	453	419	906	1260	1210
27	1990	1550	1730	1410	1060	1220	705	461	427	989	1260	1230
28	1990	1500	1710	1420	1100	1220	648	463	456	1060	1250	1220
29	1990	1550	1680	1420	---	1220	683	481	474	1110	1260	1220
30	1970	1500	1660	1460	---	1220	701	501	490	1130	1260	1230
31	1780	---	1650	1200	---	1210	---	492	---	1140	1270	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	13.5	9.5	9.0	5.0	4.5	3.0	2.5	2.5	1.0	7.0	6.5
2	14.5	13.0	9.5	8.5	4.5	4.0	2.5	2.0	3.0	2.0	7.5	6.5
3	15.0	13.5	8.5	8.0	4.5	4.5	2.0	2.0	3.5	2.5	7.0	6.5
4	15.5	14.0	8.5	8.0	5.5	4.5	2.0	.5	3.5	2.5	7.0	6.0
5	16.0	15.0	9.0	8.5	---	---	2.0	.0	3.0	3.0	7.0	6.5
6	16.0	15.5	9.0	9.0	---	---	2.0	1.5	3.0	2.5	7.5	6.5
7	15.5	14.5	9.5	9.0	---	---	1.5	.5	3.5	3.0	7.5	6.5
8	14.5	14.0	9.5	9.0	---	---	1.5	.0	4.0	3.0	8.0	7.0
9	14.0	13.5	9.0	8.0	---	---	1.5	.5	3.5	3.0	8.0	7.5
10	13.5	13.0	8.0	7.0	---	---	1.5	1.0	4.0	3.0	8.0	7.5
11	13.0	12.0	7.0	6.5	---	---	2.0	1.5	4.0	3.5	8.0	2.5
12	12.0	11.5	6.5	6.0	---	---	2.5	2.0	4.0	3.0	9.0	7.5
13	11.5	10.0	6.5	3.5	---	---	3.0	2.0	4.0	3.0	7.5	7.0
14	11.5	11.0	6.5	5.5	---	---	3.0	2.0	4.5	3.5	7.0	6.5
15	11.5	11.0	6.5	6.0	---	---	3.0	1.5	4.5	2.5	---	---
16	12.0	11.5	6.5	6.0	---	---	2.5	1.5	4.5	3.5	---	---
17	12.0	11.5	6.5	2.0	---	---	3.5	2.5	4.0	3.5	---	---
18	12.0	12.0	6.0	6.0	---	---	3.5	3.0	3.5	2.5	---	---
19	12.0	12.0	6.5	6.0	---	---	3.5	3.0	3.0	2.0	---	---
20	12.5	12.0	6.5	5.0	3.0	2.0	3.5	3.0	3.5	2.5	---	---
21	12.5	12.0	5.0	4.0	2.0	2.0	3.5	3.0	4.0	3.0	---	---
22	13.0	12.5	4.0	4.0	2.0	2.0	3.5	2.5	5.5	3.5	11.5	10.0
23	12.5	12.0	4.0	3.5	2.0	2.0	3.5	2.0	5.5	4.0	11.0	9.5
24	12.5	12.0	4.5	4.0	2.0	1.5	2.0	1.0	5.5	4.5	11.0	10.0
25	12.0	11.0	5.0	4.5	2.0	1.5	1.0	.0	5.5	4.5	10.5	9.5
26	11.0	11.0	5.5	5.0	2.0	1.5	1.0	.0	6.0	5.0	11.5	9.5
27	11.0	10.5	5.5	5.5	1.5	1.5	1.5	.5	7.0	5.5	12.5	10.0
28	11.0	10.5	5.5	5.0	2.0	1.5	1.5	1.0	7.0	6.0	13.5	11.0
29	11.0	11.0	5.5	5.0	2.5	2.0	1.5	1.0	---	---	14.0	11.5
30	11.0	11.0	5.0	5.0	3.0	2.5	1.0	.5	---	---	14.0	12.5
31	11.0	9.5	---	---	3.0	2.5	1.5	.0	---	---	14.5	12.5

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAA	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	12.0	11.5	11.0	13.5	11.5	17.5	15.5	23.0	21.5	21.5	17.5
2	12.0	11.0	12.0	10.5	14.0	12.0	17.5	16.5	23.5	21.0	21.5	17.5
3	10.5	10.0	13.0	12.0	14.5	13.0	18.0	16.5	23.5	21.0	22.0	18.5
4	10.5	9.5	13.0	11.5	15.0	13.0	17.5	15.5	23.5	21.0	22.0	19.0
5	11.0	10.0	11.5	9.5	14.0	13.0	17.5	16.0	23.0	20.5	22.0	19.5
6	12.0	10.5	9.5	8.5	14.0	11.5	18.5	16.5	23.5	21.0	22.5	19.5
7	12.5	11.0	9.5	8.5	15.5	13.0	18.5	17.5	24.0	21.0	22.0	19.5
8	12.0	11.5	10.0	9.5	16.0	13.5	19.5	17.5	24.5	21.5	19.5	18.0
9	12.0	10.0	11.5	9.5	16.0	14.5	20.5	18.5	25.0	22.0	20.0	17.5
10	10.0	9.0	13.5	11.0	16.0	14.5	20.5	19.0	24.5	22.0	20.0	18.0
11	11.0	9.5	14.0	10.0	15.0	14.0	20.0	18.5	25.5	22.0	18.5	16.5
12	12.0	10.5	14.0	13.0	15.0	13.0	20.5	19.0	23.5	22.0	17.5	15.0
13	12.5	11.5	14.5	13.5	14.5	13.0	20.5	19.0	23.0	21.0	16.5	13.5
14	13.0	11.5	15.0	14.0	15.0	13.5	21.5	19.5	21.5	19.5	15.0	13.0
15	12.5	11.5	16.0	14.5	15.0	13.5	21.5	20.5	20.0	18.0	16.5	13.5
16	12.0	10.5	16.0	14.0	15.0	13.5	21.0	20.0	20.0	18.0	17.5	14.5
17	10.5	9.5	14.5	12.0	14.5	13.5	21.0	20.0	20.0	18.0	18.0	16.0
18	9.5	8.0	12.0	10.0	14.0	13.0	21.0	19.5	19.5	17.5	16.5	13.0
19	10.0	9.0	12.5	9.5	15.0	13.5	22.0	20.5	19.5	17.0	13.0	11.0
20	11.5	9.5	14.0	11.0	14.0	13.5	21.5	20.5	20.0	17.0	13.5	10.0
21	10.5	10.0	13.5	12.0	16.0	14.5	21.0	20.5	21.5	18.0	12.5	10.0
22	10.0	9.5	14.0	11.5	16.5	14.5	21.0	19.5	21.5	20.0	13.0	10.0
23	10.5	8.5	13.5	11.5	16.5	15.0	21.5	20.0	20.5	18.0	14.5	10.5
24	12.5	9.5	13.5	12.0	17.0	15.5	22.0	20.5	21.0	18.0	15.5	12.5
25	13.5	12.0	13.5	12.0	16.5	15.5	22.0	21.0	21.5	18.5	16.5	13.5
26	13.5	12.0	12.5	10.5	16.5	15.5	23.5	21.0	21.5	18.0	17.0	14.0
27	13.0	12.0	14.0	11.5	16.0	14.5	23.5	21.5	20.5	17.5	17.0	14.5
28	12.5	11.5	13.5	12.0	16.0	15.5	23.5	19.0	21.5	17.5	17.0	14.0
29	12.0	11.0	14.0	12.0	16.0	15.0	24.0	22.0	21.0	17.5	17.0	14.5
30	12.0	10.5	15.0	13.0	16.5	14.5	24.5	22.0	21.0	17.5	17.0	14.0
31	---	---	14.0	13.0	---	---	23.5	22.0	21.0	18.0	---	---

09163530 COLORADO RIVER BELOW COLORADO-UTAH STATE LINE--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
25...	1130	3330	52	468
MAY				
02...	1200	1770	213	1020
JUN				
23...	1200	1240	181	606
AUG				
31...	1100	1990	604	3250

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
09...	1145	2230	128	771	84
FEB					
02...	1115	2330	13	87	91
MAR					
22...	1045	2720	1900	14000	--
APR					
20...	1030	4820	648	8430	--
MAY					
05...	1100	7300	1120	22100	--
JUN					
06...	1045	16700	1080	48700	58
20...	1015	21200	570	32600	55
JUL					
07...	1000	10200	383	10500	53
AUG					
24...	1015	2410	200	1300	--
SEP					
22...	1040	3870	263	2750	86

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO

There are 24 tunnels or ditches, all of which are equipped with water-stage recorders and Parshall flumes or sharp-crested weirs. Records furnished by Colorado Division of Water Resources. The locations of these diversions are given in the following list.

09010000 Grand River ditch diverts water from tributaries of Colorado River to La Poudre Pass Creek (tributary to Cache la Poudre River) in NW¼ sec.21, T.6 N., R.75 W., in Platte River basin. Two collection ditches beginning at headgates located in sec.28, T.5 N., R.76 W., and sec.29, T.6 N., R.75 W., intercept all tributaries upstream on each side of the Colorado River and converge at La Poudre Pass.
REVISIONS (WATER YEARS).--WSP 1313: 1912-27.

09012000 Eureka ditch diverts water from tributaries of Tonahutu Creek between headgate in sec.7, T.4 N., R.74 W., and Sprague Pass, in Colorado River basin, to Spruce Creek (tributary to Big Thompson River) in sec.16, T.4 N., R.74 W., in Platte River basin.
REVISIONS (WATER YEARS).--WSP 1313: 1949.

09013000 Alva B. Adams tunnel diverts water from Grand Lake and Shadow Mountain Lake in NW¼ sec.9, T.3 N., R.75 W., in Colorado River basin, to Lake Estes (Big Thompson River) in sec.30, T.5 N., R.72 W., in Platte River basin. For daily discharge, see elsewhere in this report.

09021500 Berthoud Pass ditch diverts water from tributaries of Fraser River between headgate in sec.33, T.2 S., R.75 W., and Berthoud Pass, in Colorado River basin, to Hoop Creek (tributary to West Fork Clear Creek) in sec.10, T.3 S., R.75 W., in Platte River basin.

09022500 Moffat water tunnel diverts water from tributaries of Williams Fork (via August P. Gumlick and Vasquez tunnels, beginning in 1959) between headgates (in secs.20 and 29, T.3 S., R.76 W.) and west portal of August P. Gumlick tunnel (in sec.28, T.3 S., R.76 W.) and from the main stem and tributaries of Fraser River between headgates (in sec.8, T.2 S., R.76 W., and sec.24, T.1 S., R.75 W.) and west portal of Moffat tunnel (in sec.11, T.2 S., R.75 W.), in Colorado River basin, to South Boulder Creek, in sec.2, T.2 S., R.74 W., in Platte River basin. (See sta. 09036000 for diversions by August P. Gumlick tunnel.)

09042000 Hoosier Pass tunnel diverts water from tributaries of Blue River in Colorado River basin to Montgomery Reservoir (Middle Fork South Platte River) in sec.14, T.8 S., R.78 W., in Platte River basin; this water is again diverted to South Catamount Creek (tributary to Catamount Creek) in SE¼ sec.14, T.13 S., R.69 W., in the Arkansas River basin. Collection conduits extending from the right bank of Crystal Creek (tributary to Spruce Creek) in sec.14, T.7 S., R.78 W., right bank of Spruce Creek in sec.23, T.7 S., R.78 W., right bank of McCullough Gulch in sec.26, T.7 S., R.78 W., right bank of Monte Cristo Creek in SW¼NE¼ sec.2, T.8 S., R.78 W., left bank of Bemrose Creek in SW¼SW¼ sec.6, T.8 S., R.77 W., and intercepting intermediate tributaries, transport diversions to north portal of the tunnel.

09046000 Boreas Pass ditch diverts water from tributaries of Blue River between headgate in sec.26, T.7 S., R.77 W., and Boreas Pass, in Colorado River basin, to Tarryall Creek in sec.26, T.7 S., R.77 W., in Platte River basin.
REVISIONS (WATER YEARS).--WSP 1733: 1958.

09047300 Vidler tunnel diverts water from tributaries of Peru Creek (tributary to Snake River) in sec.9, T.5 S., R.75 W., in Blue River basin, to Leavenworth Creek (tributary to South Clear Creek) in sec.10, T.5 S., R.75 W., in Platte River basin.

09050590 Harold D. Roberts tunnel diverts water from Dillon Reservoir (Blue River) in sec.18, T.5 S., R.77 W., in Blue River basin, to North Fork South Platte River (tributary to South Platte River) in SW¼SW¼ sec.4, T.7 S., R.74 W., in Platte River basin. Figures include a small amount of ground-water inflow between Dillon Reservoir and east portal of tunnel.

09061500 Columbine ditch diverts water from tributaries of Eagle River in sec.5, T.8 S., R.79 W., in Colorado River basin to Chalk Creek (tributary to East Fork Arkansas River) in NW¼ sec.9, T.8 S., R.79 W., in Arkansas River basin.

09062000 Ewing ditch diverts water from Piney Creek in sec.11, T.8 S., R.80 W., in Eagle River basin, to Thayer Gulch (tributary to Tennessee Creek) in sec.11, T.8 S., R.80 W., in Arkansas River basin.

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO--Continued

09062500 Wurtz ditch diverts water from tributaries of Eagle River between headgate in sec.32, T.7 S., R.80 W., and Tennessee Pass, in Colorado River basin, to west Tennessee Creek (tributary to Tennessee Creek) in sec.17, T.8 S., R.80 W., in Arkansas River basin.

09063700 Homestake tunnel diverts water from Homestake Lake (Middle Fork Homestake Creek), in sec.17, T.8 S., R.81 W., in Eagle River basin, to Lake Fork in sec.9, T.9 S., R.81 W., in Arkansas River basin. Water is imported to Homestake Lake from tributaries of Homestake Creek by collection conduits that extend from right bank of French Creek in sec.28, T.7 S., R.81 W., and left bank of East Fork Homestake Creek in sec.9, T.8 S., R.81 W., and intercept intermediate tributaries.

09073000 Twin Lakes tunnel diverts water from tributaries of Roaring Fork River between headgates (in sec.21, T.11 S., R.83 W., and sec.2, T.11 S., R.83 W.), and west portal of Twin Lakes tunnel (in sec.24, T.11 S., R.83 W.), in Colorado River basin, to North Fork Lake Creek in sec.22, T.11 S., R.82 W., in Arkansas River basin.

09077160 Charles H. Boustead Tunnel diverts water from the main stem and tributaries of Fryingpan River (tributary to Roaring Fork River), in Colorado River basin, to Lake Fork in sec.10, T.9 S., R.81 W., in Arkansas River basin. Water is transported to west portal of tunnel (at lat 39°14'44", long 106°31'47"), by a series of collection conduits extending between headgates on right bank of Sawyer Creek at lat 39°15'58", long 106°38'19", and right bank of Fryingpan River at lat 39°14'40", long 106°31'49", and intercepting intermediate tributaries.

09077500 Busk-Ivanhoe tunnel diverts water from Ivanhoe Lake (Ivanhoe Creek), tributary to Fryingpan River in sec.13, T.9 S., R.82 W., in Roaring Fork River basin, to Busk Creek (tributary to Lake Fork) in sec.20, T.9 S., R.81 W., in Arkansas River basin.

09115000 Larkspur ditch diverts water from tributaries of Tomichi Creek between headgates (in sec.11, T.48 N., R.6 E., and sec.1, T.47 N., R.6 E.), and Marshall Pass, in Gunnison River basin, to Poncha Creek (tributary to South Arkansas River) in SE¼ sec.24, T.48 N., R.6 E., in Arkansas River basin.

09118200 Tarbell ditch diverts water from Lake Fork Cochetopa Creek (tributary to Cochetopa Creek), in NW¼ sec.18, T.43 N., R.2 E., in Gunnison River basin, to Lake Fork Saguache Creek (tributary to Middle Fork Saguache Creek) in NE¼ sec.18, T.43 N., R.2 E., in Rio Grande Basin. All records available prior to October 1960 published in WSP 1733.

REVISIONS (WATER YEARS).--WSP 1733: 1949-51.

09121000 Tabor ditch diverts water from tributaries of Cebolla Creek in secs.29 and 30, T.43 N., R.3 W., in Gunnison River basin, to Big Spring Creek (tributary to North Clear Creek) in sec.35, T.43 N., R.3 W., in Rio Grande basin.

09341000 Treasure Pass diversion ditch diverts water from tributaries of Wolf Creek between headgates (in sec.31, T.38 N., R.2 E., and sec.6, T.37 N., R.3 E.), and Wolf Creek Pass, in San Juan River basin, to tributary of South Fork Rio Grande in sec.31, T.38 N., R.2 E., in Rio Grande basin.

09347000 Don La Font ditches 1 and 2 divert water from tributaries of Piedra River between headgates in NW¼ sec.4, T.38 N., R.1 W., and SW¼ sec.33, T.39 N., R.1 W.), and Piedra Pass, in San Juan River basin, to South River in sec.4, T.38 N., R.1 W., in Rio Grande basin.

09348000 Williams Creek-Squaw Pass ditch diverts water from Williams Creek (tributary to Piedra River) in sec.13, T.39 N., R.3 W., in San Juan River basin, to Squaw Creek in sec.10, T.39 N., R.3 W., in Rio Grande basin.

09351000 Pine River-Weminuche Pass ditch diverts water from North Fork Los Pinos River (tributary to Los Pinos River) in sec.4, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec.33, T.40 N., R.4 W., in Rio Grande basin.

09351500 Weminuche Pass ditch diverts water from left bank of Rincon la Vaca Creek (tributary to Los Pinos River) in sec.5, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec.33, T.40 N., R.4 W., in Rio Grande basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
TO PLATTE RIVER BASIN													
09010000 Grand River ditch	33	0	0	0	0	0	56	454	10,300	11,040	2,680	670	25,230
09012000 Eureka ditch	0	0	0	0	0	0	0	0	27	15	0	0	42
09013000 Alva B. Adams tunnel	19,480	18,430	28,240	28,210	27,930	30,970	19,160	15,970	6,730	12,530	30,120	25,910	263,700
09021500 Berthoud Pass ditch	0	0	0	0	0	0	0	0	36	438	151	52	677
09022500 Moffat water tunnel	2,080	1,330	1,030	813	609	626	1,380	10,630	38,150	16,290	6,160	2,480	81,590
09046000 Boreas Pass ditch	0	0	0	0	0	0	0	0	66	100	9.0	0	174
09047300 Vidler tunnel	0	0	0	0	0	0	0	0	0	134	91	30	256
09050590 Harold D. Roberts tunnel	16,120	6,170	6,440	6,660	6,000	6,360	6,810	7,760	8,720	23,830	24,850	14,040	133,800
Total	37,710	25,930	35,710	35,680	34,540	37,960	27,410	34,810	64,030	64,380	64,060	43,180	505,400
TO ARKANSAS RIVER BASIN													
09042000 Hoosier Pass tunnel	0	0	0	0	0	0	45	677	4,800	1,170	1,260	1,800	9,750
09061500 Columbine ditch	0	0	0	0	0	0	0	67	1,500	381	43	0	1,990
09062000 Ewing ditch	0	0	0	0	0	0	0	179	781	232	72	0	1,280
09062500 Wurtz ditch	0	0	0	0	0	0	0	496	2,680	593	68	0	3,840
09063700 Homestake tunnel	0	0	0	0	0	0	0	0	0	0	0	0	0
09073000 Twin Lakes tunnel	222	264	65	154	115	228	330	4,140	30,110	13,640	1,840	653	51,770
09077160 Charles H. Boustead Tunnel	0	0	0	0	0	0	58	4,890	30,310	13,710	996	0	49,960
09077500 Busk-Ivanhoe tunnel	88	0	0	0	0	0	0	352	4,680	2,160	162	29	7,470
09115000 Larkspur ditch	0	0	0	0	0	0	0	0	35	12	7.9		54
Total	310	264	65	154	115	228	433	10,800	74,900	31,900	4,450	2,480	126,100
TO RIO GRANDE BASIN													
09118200 Tarbell ditch	5.9	0	0	0	0	0	0	28	296	135	38	0	503
09121000 Tabor ditch	0	0	0	0	0	0	0	94	451	132	43	0	719
09341000 Treasure Pass diversion ditch	0	0	0	0	0	0	0	17	248	39	0	0	304
09347000 Don La Font ditches Nos. 1 and 2	0	0	0	0	0	0	0	0	80	12	0	0	92
09348000 Williams Creek-Squaw Pass ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
09351000 Pine River-Weminuche Pass ditch	0	0	0	0	0	0	0	0	49	14	0	0	63
09351500 Weminuche Pass ditch	0	0	0	0	0	0	0	0	1,270	284	20	0	1,570
Total	6	0	0	0	0	0	0	139	2,390	616	101	0	3,250
Grand Total	38,030	26,190	35,780	35,830	34,660	38,190	27,840	45,750	141,320	96,900	68,610	45,660	634,760

NOTE: Due to method of computing water year figures and rounding procedures, totals do not agree.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and discharge at crest-stage stations; and the third is a table containing storm precipitation and related runoff from storm-runoff partial-record stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a fourth table.

LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1978

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (ft³/s)
*09058900	Moniger Creek near Minturn, CO	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi (2.4 km) upstream from mouth, 7.5 mi (12.1 km) north of Minturn.	0.76	1965-78	11-17-77	0
					6- 7-78	6.8
					6-20-78	6.5
					7-12-78	.55
					9- 8-78	.02

*Also a crest-stage partial-record station.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1978

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft³/s)
		PINEY RIVER BASIN					
*09058900	Moniger Creek near Minturn, CO	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi (2.4 km) upstream from mouth, 7.5 mi (12.1 km) north of Minturn.	0.76	1965-78	6- 7-78	(a)	6.8
		GUNNISON RIVER BASIN					
09151700	Deer Creek tributary near Dominguez, CO	Lat 38°51'30", long 108°18'53", in NE¼ sec.36, T.3 S., R.2 E., Ute Meridian, Mesa County, at culvert at U.S. Highway 50, 4 mi (6 km) north of Dominguez.	b4	1971-78	1978	(c)	<16
		LITTLE SALT WASH BASIN					
09153200	Little Salt Wash tributary near Fruita, CO	Lat 39°13'16", long 108°38'57", in NE¼NE¼ sec.25, T.2 N., R.2 W., Ute Meridian, Mesa County, 200 ft (61 m) below bridge on 21 Rd., 6 mi (10 km) northeast of Fruita.	2.88	1971-78	1977d	(c)	<15
		SALT CREEK BASIN					
09163300	East Salt Creek tributary near Mack, CO	Lat 39°21'24", long 108°48'58", in SW¼SE¼ sec.18, T.8 S., R.102 W., Mesa County, at culvert at State Highway 139, 10 mi (16 km) northeast of Mack.	1.67	1971-78	1977d	(c)	<5

*Also a low-flow partial-record station.
a Not determined.
b Approximately.
c Peak stage did not reach bottom of gage.
d Revised.

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09010500 - COLORADO R BELOW BAKER GULCH, NR GRAND LAKE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
17...	75	5.0	13...	70	.0
DEC			MAY		
14...	70	.0	23...	55	10.5
JAN			JUN		
10...	125	.0	13...	<50	12.0
FEB			JUL		
15...	75	.0	26...	75	12.0
MAR			AUG		
14...	80	.0	22...	65	12.5

09011000 - COLORADO RIVER NEAR GRAND LAKE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
17...	--	7.0	13...	80	2.0
DEC			MAY		
14...	80	.5	23...	<50	9.0
JAN			JUN		
10...	--	.5	13...	<50	14.0
FEB			JUL		
15...	80	1.0	26...	78	16.0
MAR			AUG		
14...	90	.0	22...	70	13.0

09018500 - LAKE GRANBY NEAR GRANBY, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUN		
15...	65	12.0

09019000 - COLORADO RIVER BELOW LAKE GRANBY, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
DEC		
13...	60	1.5
FEB		
14...	60	3.5
APR		
13...	70	3.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
23...	75	10.0
JUL		
26...	62	12.0
AUG		
21...	65	11.5

09019500 - COLORADO RIVER NEAR GRANBY, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
17...	78	10.5
APR		
13...	90	8.0
29...	--	10.0
MAY		
23...	140	9.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL		
27...	70	12.0
AUG		
21...	65	16.0

09021000 - WILLOW CREEK BELOW WILLOW CREEK RESERVOIR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
18...	120	10.0
NOV		
21...	120	3.0
DEC		
13...	110	1.0
JAN		
11...	190	2.0
FEB		
14...	120	3.0
MAR		
14...	125	2.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
APR		
13...	140	5.0
MAY		
22...	80	6.5
JUN		
14...	70	8.5
JUL		
26...	75	10.0
27...	78	10.0

09024000 - FRASER RIVER NEAR WINTER PARK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 11...	100	.5	MAR 20...	140	.0
NOV 15...	80	1.0	APR 28...	110	4.0
DEC 13...	70	.0	MAY 30...	95	4.5
JAN 16...	95	.0	JUL 20...	60	9.0
FEB 22...	120	.0	AUG 21...	70	11.0

09025000 - VASQUEZ CREEK NEAR WINTER PARK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 11...	50	.5	MAR 20...	<50	.0
NOV 15...	50	.0	APR 28...	<50	3.0
DEC 13...	<50	1.0	MAY 30...	<50	6.0
JAN 16...	<50	.0	JUL 20...	<50	9.0
FEB 22...	70	.0	AUG 21...	50	10.0

09025400 - ELK CREEK NEAR FRASER, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	55	4.5	APR 28...	<50	2.0
NOV 15...	58	1.0	MAY 24...	<50	11.0
DEC 13...	60	.0	JUN 15...	<50	17.0
JAN 23...	68	.0	JUL 20...	<50	9.0
FEB 22...	68	.0	AUG 21...	60	14.0
MAR 20...	70	.0			

09026500 - ST. LOUIS CREEK NEAR FRASER, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	90	.5
NOV 15...	90	.0
DEC 13...	90	.0
JAN 23...	85	.0
FEB 24...	95	.0
MAR 23...	95	.5
APR 27...	110	2.0
MAY 25...	70	3.5
JUN 15...	165	6.0
JUL 19...	70	12.0
AUG 22...	80	9.5

09032000 - RANCH CREEK NEAR FRASER, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	50	.0
NOV 18...	<50	1.0
DEC 13...	50	.0
JAN 23...	55	.0
FEB 24...	<50	.0
MAR 23...	<50	.5
APR 28...	<50	1.5
MAY 25...	<50	4.5
JUN 15...	<50	6.5
JUL 19...	<50	10.0
AUG 21...	<50	10.0

09034900 - BOBTAIL CREEK NEAR JONES PASS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 26...	60	.0
DEC 12...	<50	.0
JAN 13...	70	.0
FEB 09...	<50	.0
MAR 24...	<50	.0
APR 21...	60	.0
JUN 16...	85	3.0
AUG 01...	<50	6.0
SEP 05...	<50	10.5

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09035500 - WILLIAMS FORK BELOW STEELMAN CREEK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
26...	63	.0
JAN		
13...	60	.0
FEB		
09...	<50	.0
MAY		
16...	<50	3.0
AUG		
01...	<50	10.0
SEP		
05...	<50	9.5

09035700 - WILLIAMS FORK ABOVE DARLING CREEK, NR LEAL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
14...	60	1.0
NOV		
18...	68	1.0
22...	--	1.0
DEC		
20...	65	.0
JAN		
18...	60	.0
FEB		
07...	70	.0
MAR		
21...	75	2.0
APR		
25...	75	6.0
MAY		
22...	<50	6.0
JUN		
13...	60	6.0
20...	<50	6.5
JUL		
17...	<50	--
AUG		
23...	55	13.5

09035800 - DARLING CREEK NEAR LEAL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
14...	70	1.0
NOV		
17...	75	1.0
DEC		
20...	50	.0
JAN		
18...	55	1.0
FEB		
07...	80	.5
MAR		
21...	55	2.0
APR		
26...	80	3.0
MAY		
22...	65	5.0
JUN		
14...	65	5.0
20...	60	6.0
JUL		
19...	60	7.0
AUG		
23...	70	9.5

09035900 - SOUTH FORK OF WILLIAMS FORK NEAR LEAL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
14...	85	1.0
NOV		
17...	--	.0
DEC		
20...	--	.0
JAN		
18...	75	.0
FEB		
07...	90	.0
MAR		
21...	100	.0
APR		
25...	90	5.0
MAY		
22...	80	6.0
JUN		
14...	<50	6.0
JUL		
17...	<50	12.5
AUG		
23...	85	7.5

09036000 - WILLIAMS FORK NEAR LEAL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
13...	80	6.5
NOV		
17...	85	2.0
DEC		
14...	85	2.0
JAN		
24...	72	.5
FEB		
23...	90	1.5
MAR		
22...	120	3.5
APR		
26...	90	7.5
MAY		
24...	80	10.0
JUN		
12...	<50	9.5
20...	<50	10.5
JUL		
17...	<50	12.0
AUG		
24...	60	11.5

09037500 - WILLIAMS FORK NEAR PARSHALL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
13...	90	1.0
NOV		
16...	90	1.0
DEC		
14...	95	.0
JAN		
24...	<50	.0
FEB		
25...	80	.0
MAR		
23...	100	.0
APR		
26...	90	6.0
MAY		
31...	85	7.0
JUN		
14...	70	7.0
21...	75	7.5
JUL		
18...	80	18.0
AUG		
24...	85	14.5

09038500 - WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 13...	135	7.0	MAR 22...	260	4.0
NOV 16...	130	6.0	APR 26...	125	4.0
DEC 14...	120	2.5	MAY 23...	130	6.0
JAN 24...	140	1.0	JUL 18...	120	8.0
FEB 23...	130	.5	AUG 24...	100	9.0

09039000 - TROUBLESOME CREEK NEAR PEARMONT, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 06...	110	7.0	APR 27...	100	3.5
NOV 16...	85	1.0	MAY 10...	105	5.0
			23...	90	8.0
DEC 15...	75	.0	JUN 13...	70	8.0
JAN 17...	80	.0	19...	60	10.5
FEB 08...	110	.0	JUL 18...	80	10.0
MAR 22...	100	.5	AUG 22...	100	13.0

09040000 - EAST FORK TROUBLESOME C NEAR TROUBLESOME, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 06...	210	8.0	APR 27...	150	3.5
NOV 16...	195	.5	MAY 10...	130	7.0
			23...	110	8.0
DEC 15...	80	.0	JUN 13...	100	9.0
JAN 17...	160	.0	JUL 18...	80	17.5
FEB 24...	170	.0	AUG 22...	260	18.0
MAR 22...	195	3.0			

09046600 - BLUE RIVER NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 11...	160	--	JUN 12...	--	8.0
NOV 15...	160	6.5	JUL 27...	--	11.5
DEC 13...	75	--	AUG 25...	--	10.0

09047500 - SNAKE RIVER NEAR MONTEZUMA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	150	2.0	APR 05...	135	3.0
NOV 15...	--	.5	JUN 05...	85	4.5
DEC 13...	70	.0	JUL 27...	80	14.0
JAN 25...	80	.0	AUG 24...	100	7.5
MAR 28...	160	2.0			

09047700 - KEYSTONE GULCH NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	80	2.0	JUN 12...	46	6.0
NOV 15...	85	.0	21...	46	5.5
DEC 13...	<50	.0	JUL 27...	80	12.5
MAR 28...	90	1.0	AUG 24...	80	8.5
APR 05...	90	1.5			

09050100 - TENMILE CREEK BL NORTH TENMILE C. AT FRISCO, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 11...	125	2.0	JUL 27...	100	10.5
NOV 15...	160	1.5	AUG 25...	140	10.0
DEC 13...	80	.0			

09050700 - BLUE RIVER BELOW DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV 18...	--	2.0	JUN 05...	--	6.0
JAN 25...	--	2.0	JUL 27...	--	6.5
FEB 22...	140	2.0	AUG 25...	185	7.5

09052000 - ROCK CREEK NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
DEC 14...	<50	.0	JUN 13...	26	6.0
APR 06...	60	1.0	22...	24	5.5
JUN 06...	60	3.5	AUG 25...	<50	8.5

09052400 - BOULDER CREEK AT UPPER STATION, NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAR		
13...	<50	5.5	31...	<50	.0
NOV			JUN		
17...	60	1.0	06...	<50	4.5
DEC			13...	<50	--
15...	<50	.0	SEP		
JAN			06...	<50	10.0
19...	<50	.0			

09052800 - SLATE CREEK AT UPPER STATION, NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAY		
13...	<50	2.5	09...	<50	2.5
NOV			JUN		
18...	70	1.0	07...	62	5.5
23...	<50	.0	15...	24	5.0
DEC			22...	22	10.0
19...	150	.0	JUL		
JAN			13...	<50	12.0
19...	<50	.0	AUG		
FEB			29...	<50	11.0
23...	<50	.0			
APR					
11...	--	2.0			

09054000 - BLACK CREEK BELOW BLACK LAKE, NEAR DILLON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAR		
12...	<50	8.0	30...	--	2.0
NOV			JUL		
17...	<50	3.5	13...	60	10.5
DEC			AUG		
16...	<50	.0	30...	<50	14.0
JAN					
20...	60	.0			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09055300 - CATARACT CREEK NEAR KREMMLING, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	<50	6.5	MAR 29...	80	1.5
NOV 16...	60	1.5	JUN 08...	80	5.5
DEC 16...	--	.0	AUG 29...	--	16.0
JAN 17...	<50	.5			

09057500 - BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV 16...	170	6.0	MAR 29...	190	2.0
DEC 14...	150	2.0	JUN 08...	--	8.0
JAN 24...	150	2.0	AUG 29...	120	10.5

09058000 - COLORADO RIVER NEAR KREMMLING, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 03...	210	11.0	AUG 24...	185	15.5
20...	260	8.5			
NOV 16...	250	2.5			

09058500 - PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			APR		
18...	<50	3.5	19...	60	3.5
NOV			JUN		
17...	<50	.0	06...	38	9.0
JAN			20...	--	7.5
11...	52	.0	JUL		
FEB			12...	27	10.5
14...	48	.0	SEP		
MAR			07...	46	14.5
20...	60	.5			

09058610 - DICKSON CREEK NEAR VAIL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
18...	370	7.5	07...	220	6.0
NOV			21...	200	6.5
17...	390	1.0	JUL		
FEB			12...	310	12.5
15...	--	.0	SEP		
APR			07...	410	14.5
18...	360	3.0			

09058700 - FREEMAN CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
18...	220	4.0	07...	85	5.5
NOV			21...	180	11.5
17...	230	.0	JUL		
FEB			12...	180	18.0
15...	--	.0	SEP		
APR			07...	200	14.5
18...	220	.5			

09058800 - EAST MEADOW CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
18...	<50	.5
APR		
19...	70	1.0
JUN		
06...	48	2.0
20...	37	2.5
JUL		
12...	33	6.0
SEP		
07...	56	7.5

09058900 - MONIGER CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUN		
07...	65	1.0
20...	90	9.0
JUL		
12...	130	12.5
SEP		
08...	180	6.5

09059500 - PINEY RIVER NEAR STATE BRIDGE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
17...	--	7.5
NOV		
15...	360	2.5
JAN		
09...	360	.0
FEB		
08...	370	1.5
MAR		
23...	350	2.0
APR		
04...	340	6.5
MAY		
01...	220	7.0
10...	260	9.0
JUN		
05...	146	7.0
14...	110	5.5
JUL		
14...	110	10.5
AUG		
30...	340	13.0

09060500 - ROCK CREEK NEAR TOPONAS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
19...	--	7.0
NOV		
17...	115	1.0

09063000 - EAGLE RIVER AT RED CLIFF, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
01...	240	3.0
22...	220	.0
JAN		
10...	230	.0
FEB		
06...	220	.5
MAR		
22...	220	2.5
APR		
05...	200	5.0
MAY		
09...	220	.5
JUN		
09...	125	8.5
16...	110	5.0
JUL		
13...	180	7.0
AUG		
31...	230	12.0

09063200 - WEARYMAN CREEK NEAR RED CLIFF, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
31...	180	1.5
FEB		
06...	270	.5
MAR		
22...	230	1.0
APR		
05...	300	1.0
MAY		
09...	260	--
JUN		
09...	200	4.0
22...	200	6.5
JUL		
13...	220	6.0
AUG		
31...	220	6.5

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09064500 - HOMESTAKE CREEK NEAR RED CLIFF, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV			MAY		
01...	<50	1.0	09...	42	1.0
21...	<50	.0	JUN		
JAN			08...	31	9.0
10...	50	.0	19...	32	5.0
FEB			JUL		
07...	<50	.5	10...	28	14.0
MAR			AUG		
21...	42	3.0	31...	33	10.5
APR					
06...	50	.5			

09065500 - GORE CREEK AT UPPER STATION, NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
18...	90	4.0	09...	130	3.5
NOV			24...	130	6.0
17...	120	.0	JUN		
DEC			12...	80	5.0
20...	80	.0	JUL		
JAN			13...	90	9.0
24...	110	.0	AUG		
FEB			25...	60	10.0
23...	190	.0	SEP		
MAR			26...	80	7.0
21...	220	1.0			

09066000 - BLACK GORE CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
18...	180	4.0	13...	295	1.5
NOV			MAY		
15...	180	1.0	09...	280	3.0
DEC			24...	180	6.5
20...	160	.0	JUN		
JAN			13...	150	6.0
24...	110	.0	28...	90	10.0
FEB			AUG		
23...	160	.0	25...	60	11.0
MAR			SEP		
23...	285	1.0	26...	60	7.0

09066100 - HIGHORN CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
17...	90	4.0
NOV		
17...	80	.0
DEC		
21...	80	.0
JAN		
25...	120	.0
FEB		
22...	170	.0
MAR		
22...	175	1.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
04...	180	4.0
JUN		
13...	180	7.0
22...	120	4.0
JUL		
20...	85	8.0
SEP		
07...	95	8.0

09066150 - PITKIN CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
17...	110	4.0
NOV		
17...	120	1.0
DEC		
20...	120	.0
JAN		
25...	130	.0
FEB		
23...	180	.0
MAR		
22...	195	1.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
APR		
13...	175	1.0
MAY		
04...	120	4.5
23...	140	5.0
JUN		
13...	120	5.0
JUL		
20...	100	8.0
SEP		
07...	95	8.0

09066200 - BOOTH CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
19...	110	4.0
NOV		
17...	110	1.0
DEC		
21...	80	.0
JAN		
25...	95	.0
FEB		
21...	160	.0
MAR		
23...	185	1.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
APR		
13...	140	1.0
MAY		
04...	180	5.0
JUN		
13...	180	5.0
22...	120	4.0
JUL		
20...	95	8.0
AUG		
25...	55	11.0

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09063400 - TURKEY CREEK NEAR RED CLIFF, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
31...	260	2.0
NOV		
22...	260	.0
JAN		
10...	270	.0
FEB		
06...	270	.5
MAR		
22...	280	1.0
APR		
05...	280	2.0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
MAY		
09...	260	3.0
JUN		
09...	200	3.0
14...	200	6.0
21...	170	7.5
JUL		
13...	190	5.5
AUG		
31...	260	8.0

09063900 - MISSOURI CREEK NEAR GOLD PARK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
01...	<50	.0
FEB		
07...	<50	.0
MAR		
21...	38	.0
MAY		
03...	42	1.0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUN		
08...	30	2.0
16...	25	5.0
22...	22	3.5
JUL		
13...	22	12.0
AUG		
31...	22	7.0

09064000 - HOMESTAKE CREEK AT GOLD PARK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
01...	<50	.5
21...	<50	.0
FEB		
07...	<50	.0
MAR		
21...	46	1.0
MAY		
03...	40	3.5

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUN		
08...	30	7.5
22...	22	4.0
JUL		
13...	32	8.5
AUG		
31...	30	7.5

09066300 - MIDDLE CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
18...	80	4.0
NOV		
16...	110	1.0
DEC		
21...	90	.0
JAN		
25...	80	.0
FEB		
23...	130	.0
MAR		
22...	150	1.0
MAY		
04...	120	5.0
24...	180	5.0
JUN		
12...	75	5.0
JUL		
06...	85	8.0
AUG		
25...	<50	11.0

09066400 - RED SANDSTONE CREEK NEAR MINTURN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
18...	70	.5
NOV		
16...	90	.0
JAN		
11...	70	.0
FEB		
08...	--	.5
14...	90	.0
MAR		
20...	85	1.0
APR		
18...	75	1.5
JUN		
06...	52	5.5
21...	48	7.0
JUL		
12...	60	11.0
SEP		
08...	95	5.0

09070000 - EAGLE RIVER BELOW GYPSUM, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
12...	880	4.5
NOV		
16...	970	4.0
DEC		
07...	1170	1.0
13...	950	.5
JAN		
17...	1010	.5
FEB		
14...	920	2.0
MAR		
14...	860	4.5
APR		
11...	510	10.5
MAY		
23...	230	10.0
JUN		
07...	205	9.5
20...	180	9.0
JUL		
19...	295	14.5
AUG		
24...	780	17.0

09071300 - GRIZZLY CREEK NEAR GLENWOOD SPRINGS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			JUL		
19...	240	3.5	11...	--	10.5
NOV			AUG		
16...	290	.0	29...	160	11.5
JUN					
13...	200	.5			
15...	--	2.5			

09073400 - ROARING FORK RIVER NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV			MAY		
08...	75	2.0	09...	70	11.0
DEC			JUN		
06...	80	.0	07...	30	9.0
JAN			20...	22	9.0
12...	85	.0	JUL		
FEB			11...	38	12.0
15...	120	2.0	AUG		
MAR			22...	60	13.0
29...	110	2.5			

09073700 - HUNTER CREEK ABOVE MIDWAY CREEK, NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			JUL		
12...	<50	.0	18...	28	11.0
APR			AUG		
26...	28	.5	29...	32	10.0
JUN					
01...	30	1.5			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09073800 - MIDWAY CREEK NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			JUL		
12...	<50	.0	19...	30	10.5
APR			AUG		
26...	32	.5	29...	32	12.5
JUN					
01...	28	2.0			

09073900 - NO NAME CREEK NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			JUL		
13...	<50	.0	19...	28	8.5
APR			SEP		
26...	41	.5	06...	<50	7.5
JUN					
02...	<50	1.5			

09074000 - HUNTER CREEK NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV			JUN		
08...	55	1.0	07...	50	8.0
JAN			20...	24	10.0
12...	--	.0	JUL		
FEB			13...	20	8.0
15...	120	.0	AUG		
MAR			22...	46	12.0
28...	70	4.0			
MAY					
09...	--	9.0			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09074800 - CASTLE CREEK ABOVE ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV 08...	380	2.0	JUN 07...	200	9.0
			20...	140	9.0
JAN 12...	380	.5	JUL 11...	180	7.0
FEB 15...	500	.0	AUG 22...	280	9.0
MAR 28...	440	7.0			
MAY 09...	380	8.0			

09075700 - MAROON CREEK ABOVE ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 19...	590	8.0	MAY 09...	600	6.0
NOV 10...	650	3.5	JUN 07...	280	9.0
			20...	200	8.0
JAN 09...	700	2.0	JUL 11...	220	7.0
FEB 13...	750	--	AUG 22...	340	8.0
MAR 28...	750	5.0			

09076520 - OWL CREEK NEAR ASPEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV 08...	625	2.0	JUN 07...	300	10.0
			20...	380	10.0
JAN 12...	600	.5	JUL 11...	240	14.0
FEB 13...	600	.0	AUG 22...	480	12.0
MAR 29...	600	.0			
MAY 09...	230	1.0			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09077200 - FRYINGPAN RIVER NEAR IVANHOE LAKE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
16...	--	.5
JUN		
21...	--	8.0
JUL		
06...	--	10.0
21...	--	7.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
AUG		
02...	--	9.0
15...	--	4.0
30...	--	9.0
SEP		
13...	--	4.0
25...	--	5.0

09077610 - IVANHOE CREEK NEAR NAST, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN		
22...	--	3.5
JUL		
07...	--	6.5
21...	--	9.0
AUG		
02...	--	11.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
AUG		
15...	--	7.0
31...	--	7.5
SEP		
13...	--	6.0
25...	--	5.0

09077800 - SF FRYINGPAN R AT UPPER STATION, NR NORRIE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL		
06...	--	5.0
17...	--	8.5
AUG		
01...	--	7.0
14...	--	8.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
AUG		
30...	--	5.0
SEP		
12...	--	6.0
26...	--	5.5

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09078200 - CUNNINGHAM CREEK NEAR NORRIE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV		
09...	<50	.0
JAN		
11...	34	.0
FEB		
16...	<50	.0
MAR		
30...	<50	.5
MAY		
02...	24	2.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN		
08...	18	2.0
21...	14	2.0
JUL		
12...	14	7.0
AUG		
23...	15	8.0

09078500 - NORTH FORK FRYINGPAN RIVER NEAR NORRIE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
16...	--	6.0
JUN		
22...	--	7.5
JUL		
05...	--	8.5
24...	--	14.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
AUG		
03...	--	15.0
16...	--	14.0
31...	--	11.0
SEP		
12...	--	8.0
25...	--	5.0

09078600 - FRYINGPAN RIVER NEAR THOMASVILLE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL		
05...	--	9.0
24...	--	14.5
AUG		
03...	--	14.0
16...	--	11.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
AUG		
31...	--	12.5
SEP		
13...	--	9.0
25...	--	11.0

09077945 - CHAPMAN GULCH NEAR NAST, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUN		
21...	--	6.0
JUL		
06...	--	8.0
17...	--	10.5
AUG		
01...	--	9.0
AUG		
14...	--	8.0
30...	--	7.5
SEP		
12...	--	8.0
26...	--	4.5

09078000 - FRYINGPAN RIVER AT NORRIE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
09...	70	.0
JAN		
11...	75	.0
FEB		
16...	100	.0
MAR		
30...	70	.5
MAY		
10...	40	7.0
JUN		
08...	28	9.0
21...	28	10.0
JUL		
12...	34	14.0
AUG		
23...	48	12.0

09078100 - NF FRYINGPAN R AB CUNNINGHAM C, NR NORRIE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
09...	<50	.0
JAN		
11...	36	.0
FEB		
16...	<50	.0
MAR		
30...	70	.0
MAY		
02...	33	2.0
JUN		
08...	18	2.0
21...	12	3.0
JUL		
12...	12	7.0
AUG		
23...	25	8.0

09080100 - FRYINGPAN RIVER AT MEREDITH, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
20...	110	6.5
NOV		
10...	150	.0
DEC		
06...	130	.0
JAN		
11...	140	.5
FEB		
16...	180	.0
MAR		
29...	120	6.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
10...	80	4.0
JUN		
08...	48	9.0
21...	38	10.0
JUL		
12...	48	14.5
AUG		
23...	100	14.0

09080400 - FRYINGPAN RIVER NEAR RUEDI, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV		
10...	390	6.0
DEC		
06...	380	5.0
JAN		
11...	350	3.0
FEB		
17...	400	2.5
MAR		
29...	420	5.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
10...	310	4.5
JUN		
08...	250	10.0
21...	280	7.0
JUL		
12...	220	8.0
AUG		
23...	200	12.0

09081600 - CRYSTAL RIVER AB AVALANCHE C, NEAR REDSTONE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
21...	625	9.0
NOV		
11...	800	4.0
JAN		
13...	750	2.0
FEB		
15...	1200	5.0
MAR		
27...	650	12.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
04...	340	6.0
JUN		
07...	200	5.0
19...	130	10.0
JUL		
10...	120	12.0
AUG		
24...	380	12.0

09082800 - NORTH THOMPSON CREEK NEAR CARBONDALE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV 02...	190	.0
18...	160	1.0
JAN 10...	180	.0
FEB 09...	200	.0
MAR 27...	200	5.0
MAY 04...	130	3.0
16...	100	5.0
MAY 30...	70	7.5
JUN 19...	60	12.0
JUL 17...	140	19.5
AUG 24...	180	10.0

09085000 - ROARING FORK RIVER AT GLENWOOD SPRINGS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 11...	740	9.0
NOV 15...	770	7.5
DEC 07...	740	2.0
12...	730	3.0
JAN 16...	640	4.0
FEB 13...	620	3.5
MAR 13...	620	6.5
APR 10...	470	7.0
MAY 22...	325	10.0
JUN 06...	300	9.0
19...	240	10.0
JUL 18...	340	14.0
AUG 23...	690	15.5

09085100 - COLORADO RIVER BELOW GLENWOOD SPRINGS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 11...	1200	11.0
NOV 15...	1450	7.5
DEC 06...	1350	2.5
12...	1280	3.5
JAN 16...	1250	4.0
FEB 13...	1220	5.0
MAR 13...	1080	7.5
APR 10...	680	8.5
MAY 22...	350	11.0
JUN 06...	360	11.5
19...	265	11.5
JUL 18...	465	16.0
AUG 23...	1180	17.5

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09085200 - CANYON CREEK ABOVE NEW CASTLE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 14...	320	6.0	MAY 08...	240	7.0
NOV 07...	270	7.0	JUN 06...	220	7.0
JAN 10...	300	3.5	16...	280	6.0
FEB 16...	300	.0	JUL 21...	240	11.0
MAR 31...	320	6.0	AUG 21...	240	15.0

09085300 - EAST CANYON CREEK NEAR NEW CASTLE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 14...	390	5.0	MAY 08...	220	2.0
NOV 07...	400	6.5	JUN 06...	210	6.0
JAN 10...	400	1.5	16...	140	6.0
FEB 17...	400	1.0	JUL 20...	240	13.5
MAR 31...	340	7.0	AUG 21...	300	12.0

09085400 - POSSUM CREEK NEAR NEW CASTLE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT 11...	340	4.5	MAY 08...	340	4.0
NOV 07...	340	5.5	JUN 06...	310	7.0
JAN 10...	330	1.5	22...	280	6.0
FEB 17...	300	1.0	JUL 20...	220	12.0
MAR 31...	350	6.0	AUG 21...	280	11.0

09089500 - WEST DIVIDE CREEK NEAR RAVEN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
02...	550	2.0
DEC		
01...	480	.0
JAN		
17...	410	.0
MAR		
07...	390	.5
APR		
17...	250	2.5
JUN		
08...	225	7.0
21...	210	9.0
JUL		
20...	230	15.0
AUG		
25...	400	12.5

09092500 - BEAVER CREEK NEAR RIFLE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
20...	310	8.0
DEC		
01...	350	.0
22...	320	.0
JAN		
17...	320	.5
FEB		
15....	370	.0
MAR		
15...	390	.0
APR		
12...	355	6.0
MAY		
24...	240	8.0
JUN		
08...	220	8.5
21...	180	8.0
JUL		
20...	250	14.5
AUG		
25...	320	12.0

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09095400 - DRY FORK NEAR DE BEQUE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 28...	2750	16.0	APR 05...	1650	12.5
DEC 02...	3900	5.0	MAY 10...	1390	6.0
22...	3750	5.5	JUN 19...	1800	27.0
JAN 09...	3900	6.0	JUL 12...	1780	29.5
FEB 23...	3800	13.0	AUG 21...	1850	28.0
MAR 07...	1500	12.0			

09095526 - GOVERNMENT HIGHLINE CA AT 16 ROAD, NR LOMA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 19...	1100	12.0	JUN 05...	335	15.0
APR 18...	750	8.0	JUL 05...	375	16.5
MAY 04...	610	12.5	SEP 18...	925	15.0

09095528 - LATERAL NO. 48 NEAR MACK, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 18...	1150	13.0	JUL 06...	380	16.5
MAY 04...	610	14.0	SEP 18...	925	15.0
JUN 08...	350	17.0			

09096500 - PLATEAU CREEK NEAR COLLBRAN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
11...	220	6.0
JAN		
16...	220	.5
FEB		
27...	260	.5
MAR		
09...	190	1.0
APR		
04...	400	7.5
MAY		
11...	195	7.0
JUN		
08...	80	8.5
JUL		
28...	110	16.0
AUG		
23...	120	14.0

09097500 - BUZZARD CREEK NEAR COLLBRAN, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
11...	750	5.5
DEC		
05...	700	2.0
JAN		
16...	675	.5
FEB		
27...	650	.0
MAR		
16...	600	1.5
APR		
04...	370	7.0
MAY		
11...	245	10.0
JUN		
08...	200	10.5
JUL		
28...	610	21.0
AUG		
23...	725	20.0

09106104 - KIEFER EXTENSION GRAND VALLEY CA NR FRUITA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
19...	1100	12.0
APR		
13...	740	13.0
MAY		
04...	650	12.5
JUN		
05...	350	15.0
JUL		
05...	400	16.5
SEP		
18...	925	15.0

09106108 - KIEFER EXTENSION GRAND VALLEY CANAL NR LOMA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
18...	1100	13.0	09...	400	16.5
APR			JUL		
13...	760	13.0	06...	400	16.5
MAY			SEP		
01...	600	13.5	18...	925	15.0

09109000 - TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAY		
11...	110	10.0	08...	140	5.0
DEC			JUN		
06...	120	2.0	06...	110	6.0
JAN			JUL		
09...	100	5.0	10...	75	10.0
FEB			AUG		
14...	140	4.0	21...	75	10.5
MAR					
27...	150	4.0			

09110000 - TAYLOR RIVER AT ALMONT, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAR		
12...	110	2.0	28...	160	4.0
NOV			MAY		
29...	150	1.0	08...	150	7.5
DEC			JUN		
06...	--	.0	06...	140	8.0
06...	140	.0	JUL		
JAN			10...	110	12.0
09...	160	.5	AUG		
FEB			22...	120	11.0
14...	160	1.0			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09112500 - EAST RIVER AT ALMONT CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
12...	340	5.0
NOV		
29...	360	1.0
DEC		
06...	--	1.0
06...	330	1.0
JAN		
10...	330	1.5
FEB		
15...	350	1.5

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAR		
28...	360	9.0
MAY		
08...	300	7.0
JUN		
06...	200	10.0
15...	--	12.0
JUL		
11...	200	13.0
AUG		
22...	270	13.0

09114500 - GUNNISON RIVER NEAR GUNNISON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
12...	280	10.0
NOV		
29...	240	3.0
DEC		
08...	--	2.0
JAN		
10...	230	1.5
FEB		
15...	240	1.5
MAR		
29...	240	6.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
09...	240	7.0
JUN		
06...	185	12.0
15...	--	9.0
JUL		
11...	210	15.0
AUG		
22...	200	14.5

09119000 - TOMICHI CREEK AT GUNNISON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
14...	390	3.0
NOV		
29...	300	3.0
DEC		
08...	270	2.0
JAN		
10...	280	.5
FEB		
15...	280	.5
MAR		
28...	280	8.0

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAY		
09...	350	5.0
JUN		
07...	320	12.5
16...	--	13.5
JUL		
11...	350	19.0
AUG		
22...	290	20.0

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09124500 - LAKE FORK AT GATEVIEW, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
13...	190	5.0	09...	200	11.0
NOV			JUN		
29...	180	2.0	05...	120	9.5
JAN			16...	--	10.0
10...	180	2.0	JUL		
FEB			12...	80	11.5
15...	200	.5	AUG		
MAR			23...	120	13.5
29...	200	1.5			

09126000 - CIMARRON RIVER NEAR CIMARRON, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
14...	160	8.0	09...	120	10.0
NOV			JUN		
30...	140	.5	07...	110	7.5
JAN			20...	--	8.5
11...	160	1.5	JUL		
FEB			12...	70	9.5
16...	160	.5	20...	--	8.5
MAR			AUG		
30...	160	4.0	23...	80	13.5

09128000 - GUNNISON RIVER BELOW GUNNISON TUNNEL, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
14...	270	12.0	10...	240	7.5
NOV			JUN		
30...	270	5.5	07...	180	10.0
JAN			JUL		
11...	270	3.0	13...	160	11.0
FEB			AUG		
16...	220	2.5	24...	180	11.5
MAR					
30...	300	6.0			

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09128500 - SMITH FORK NEAR CRAWFORD, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
12...	180	7.0
DEC		
07...	180	.5
JAN		
18...	200	1.5
FEB		
15...	160	.0
MAR		
07...	180	3.5
APR		
06...	150	8.0
MAY		
10...	150	9.0
17...	75	5.5
JUN		
08...	80	10.0
JUL		
13...	100	17.5
AUG		
16...	150	18.0

09129600 - SMITH FORK NEAR LAZEAR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
12...	2800	14.0
DEC		
07...	2600	3.0
07...	2830	.0
JAN		
18...	2400	5.0
FEB		
15...	2400	2.0
MAR		
09...	2500	3.5
MAR		
31...	1060	13.0
MAY		
11...	2100	12.0
17...	290	5.5
30...	520	14.5
JUL		
14...	1400	16.5
AUG		
16...	1700	23.0

09131100 - COW CREEK NEAR PAONIA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT		
11...	180	5.0
JAN		
18...	200	.0
APR		
17...	200	1.0
MAY		
18...	70	1.0
JUN		
15...	70	11.0
AUG		
23...	--	6.0

09134050 - MINNESOTA CREEK AT PAONIA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 12...	380	5.0	APR 06...	950	11.0
DEC 06...	1000	2.5	12...	700	14.5
JAN 18...	950	2.0	MAY 10...	360	11.0
FEB 13...	--	.0	JUN 01...	300	8.0
MAR 06...	1500	3.0	JUL 13...	1250	21.5
24...	1050	5.0	AUG 16...	1600	16.0

09134200 - COTTONWOOD CREEK NEAR HOTCHKISS, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 13...	3000	4.0	APR 07...	3500	8.0
DEC 06...	5500	2.0	MAY 11...	2100	11.0
JAN 17...	3000	4.0	JUN 05...	1600	18.0
FEB 13...	5500	3.5	JUL 14...	1850	16.0
MAR 06...	5500	6.5	AUG 17...	2800	13.5

09135900 - LEROUX CR. AT HOTCHKISS, COL

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
13...	1600	7.0
DEC		
06...	1350	4.5
06...	1490	7.0
JAN		
17...	1500	7.0
FEB		
13...	1350	8.0
MAR		
06...	1390	8.5
APR		
07...	700	8.0
MAY		
11...	650	10.0
17...	170	4.0
30...	220	12.0
JUL		
17...	1650	16.5
AUG		
17...	1400	14.0

09136200 - GUNNISON RIVER NEAR LAZEAR, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
13...	1300	9.0
DEC		
07...	1400	4.0
JAN		
17...	1700	4.0
FEB		
14...	780	2.0
MAR		
08...	440	7.0
APR		
10...	370	10.0
MAY		
11...	320	10.0
JUN		
08...	250	9.5
JUL		
18...	570	18.0
AUG		
17...	1150	17.5

09137050 - CURRANT CREEK NEAR READ, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
26...	5800	7.0
DEC		
08...	5000	4.0
JAN		
19...	5400	5.0
FEB		
13...	6000	5.5
MAR		
06...	4000	9.5
APR		
07...	4600	10.5
MAY		
11...	4000	15.0
16...	--	10.0
17...	--	10.0
31...	850	11.5
JUL		
18...	--	26.0
AUG		
17...	7900	22.0

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09143000 - SURFACE CREEK NEAR CEDAREDGE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
26...	110	10.0	09...	70	3.5
DEC			16...	80	4.0
08...	180	.5	JUL		
JAN			18...	--	13.0
19...	180	.5	AUG		
APR			15...	60	13.0
14...	120	1.5			
MAY					
16...	80	4.0			

09143500 - SURFACE CREEK AT CEDAREDGE, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAY		
26...	110	7.0	12...	180	2.0
DEC			JUN		
08...	190	.5	08...	90	12.0
JAN			JUL		
19...	220	.5	18...	--	16.5
FEB			AUG		
14...	160	.5	15...	65	15.0
MAR			SEP		
09...	200	2.0	28...	--	11.0
APR					
10...	170	3.5			

09144200 - TONGUE CREEK AT CORY, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			MAY		
07...	2000	13.0	12...	690	8.0
DEC			16...	370	11.0
08...	2200	4.0	JUN		
JAN			09...	560	11.5
19...	2000	5.0	JUL		
FEB			18...	--	23.5
14...	1800	6.0	AUG		
MAR			15...	2200	23.0
09...	1900	9.0			
APR					
10...	720	6.5			

09144250 - GUNNISON RIVER AT DELTA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 26...	1300	13.0	APR 11...	590	7.5
DEC 07...	1500	4.0	MAY 16...	250	9.5
JAN 17...	1100	3.0	JUN 05...	500	11.5
FEB 14...	950	4.5	JUL 19...	--	18.0
MAR 09...	940	7.5	AUG 17...	1200	19.0

09147500 - UNCOMPAHGRE RIVER AT COLONA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 14...	850	12.0	MAY 10...	520	8.0
DEC 01...	725	1.0	JUN 01...	360	15.0
07...	800	1.0	21...	--	8.0
JAN 12...	530	3.0	JUL 06...	420	8.5
FEB 17...	880	2.0	27...	--	15.0
MAR 30...	530	12.0	AUG 24...	680	17.5

SPECIFIC CONDUCTANCE AND TEMPERATURE DATA AT SELECTED SITES

09150500 - ROURIDEAU CREEK AT MOUTH, NEAR DELTA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
15...	1650	8.0
DEC		
01...	1800	4.0
07...	1980	3.0
JAN		
12...	1950	5.0
FEB		
23...	1600	2.0
MAR		
31...	1100	12.0
MAY		
11...	650	11.0
16...	260	9.0
MAY		
17...	--	7.0
24...	280	9.0
JUN		
08...	650	15.0
21...	900	21.0
JUL		
13...	1450	21.0
AUG		
28...	1400	19.5

09151500 - ESCALANTE CREEK NEAR DELTA, CO.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
DEC		
07...	640	2.0

DELTA COUNTY

384234N108085101 SC15-96-32BAD. State of Colorado. Drilled domestic water-table well in Dakota Group. Diameter, 6 in (0.2 m). Depth, 230 ft (70.1 m). MP, 0.3 ft (0.091 m) above lsd. Altitude of land surface, 4,960 ft (1,512 m). Records available: 1976.

July 29, 1976	0.19 ft
Oct. 26, 1978	Flowing

GRAND COUNTY

400248N105560301 SB 1-76-18DBC. W. F. Linke. Drilled recreation water-table well in Middle Park Formation. Diameter, 6 in (0.2 m). Depth, 603 ft (183.8 m). MP, 6.0 ft (1.83 m) above lsd. Altitude of land surface, 8,075 ft (2,461 m). Records available: 1973-78.

Highest water level, 3.4 ft (1.04 m) below lsd, Aug. 28, 1974; lowest water level, 77.25 ft (27.546 m) below lsd, Aug. 11, 1977.

Aug. 15, 1978	3.62 ft

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